STRATEGIC SCARCITY:

THE ORIGINS AND IMPACT OF ENVIRONMENTAL CONFLICT IDEAS

Elizabeth Hartmann
Development Studies Institute
London School of Economics and Political Science

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ABSTRACT

Strategic Scarcity:

The Origins and Impact of Environmental Conflict Ideas

Elizabeth Hartmann

This thesis examines the origins and impact of environmental conflict ideas. It focuses on the work of Canadian political scientist Thomas Homer-Dixon, whose model of environmental conflict achieved considerable prominence in U.S. foreign policy circles in the 1990s. The thesis argues that this success was due in part to widely shared neo-Malthusian assumptions about the Third World, and to the support of private foundations and policymakers with a strategic interest in promoting these views. It analyzes how population control became an important feature of American foreign policy and environmentalism in the post-World War Two period. It then describes the role of the "degradation narrative" -- the belief that population pressures and poverty precipitate environmental degradation, migration, and violent conflict -- in the development of the environment and security field. Based on archival research and interviews with key policymakers, foundation officers, and scholars, the thesis identifies a process of "circumscribed heterodoxy" in which an illusion of openness to diverse views masks a politics of uniformity at both the project and policy level. It examines the intentional and unintentional effects of environmental conflict ideas on U.S. policy institutions, and considers the nature of the knowledge communities that formed around these ideas. In so doing, the thesis offers insights into the complex relationships between knowledge, power, and policy.

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MALLEABILITY AND MAPPABILITY:

THE PERSISTENCE OF NEO-MALTHUSIANISM IN THE UNITED STATES

LIST OF ABBREVIATIONS

AAAS American Association for the Advancement of Science

Academy American Academy of Arts and Sciences

ACTS African Center for Technology Studies

CCMS Committee on Challenges of Modern Society

CIA Central Intelligence Agency

CIESIN Consortium for International Earth Science Information Network

CSIS Center for Strategic and International Studies

DCI Director of Central Intelligence

DEC DCI Environmental Center

DERA British defense intelligence agency

DES Demographic and Environmental Stress

DOD U.S. Department of Defense

ECAC Environmental Change and Acute Conflict Project

Ecologic Center for International and European Environmental Research

ECSP Woodrow Wilson Center's Environmental Change and Security Project

EDSP Environment, Development and Sustainable Peace Initiative

ENCOP Environmental Conflicts Project of the Swiss Peace Foundation

EPA U.S. Environmental Protection Agency

EPS Environment, Population and Security Project

EU European Union

GEC global environmental change

GECHS Global Environmental Change and Human Security Project

GIS Geographical Information Systems

ICPD International Conference on Population and Development

IISD International Institute for Sustainable Development

INSS Institute for National Strategic Studies

IPFA Information Project for Africa

IPPF International Planned Parenthood Federation

IR International Relations

ISA International Studies Association

IUCN International Union for the Conservation of Nature

IUSIPP International Union for the Scientific Investigation of the Population Problem

IUSSP International Union for the Scientific Study of Population

MIT Massachusetts Institute of Technology

NATO North Atlantic Treaty Organization

NGO nongovernmental organization

NIC National Intelligence Council

NPA New People's Army (Philippines)

NSC National Security Council

NSDM 314 National Security Decision Memorandum 314

NSSM 200 National Security Study Memorandum 200

OECD DAC Organization for Economic Cooperation and Development, Development Assistance Committee

OPR Office of Population Research

PAA Population Association of America

PAI Population Action International

PCT Pew Charitable Trusts

PECS Population, Environmental Change and Security Initiative

PGSI Pew Global Stewardship Initiative

PRB Population Reference Bureau

PRIO International Peace Research Institute, Norway

SFTF State Failure Task Force

SIVAM System for Vigilance of the Amazon

SSRC Social Science Research Council

State Capacity Environmental Scarcities, State Capacity and Civil Violence Project

USAID U.S. Agency for International Development

UNCED UN Conference on Environment and Development

UNDP UN Development Program

UNEP UN Environment Program

UNFPA UN Fund for Population Activities

WEDO Women's Environment and Development Organization

WRI World Resources Institute

ACKNOWLEDGEMENTS

In the course of my research, Steve Lonergan invited me to serve on the steering committee of the Global Environmental Change and Security Project (GECHS), an affiliation which has significantly broadened my perspective on environmental security and global environmental change research. I would like to thank all my colleagues at GECHS for the help they have given me and for providing a venue where I could share my ideas. Through its AVISO series, GECHS allowed me to write a policy brief on population and later to present the analysis at the Woodrow Wilson Center, giving my work more exposure in policy circles.

Simon Dalby kindly shared the manuscript of his forthcoming book on environmental security with me, which provided numerous references and insights into the subject and introduced me to the field of critical geography. Ronnie Lipschutz's work was also very helpful. Being included in Nancy Peluso and Michael Watts' edited volume on Violent Environments deepened my understanding of political ecology and the critical perspectives it offers on environmental conflict ideas. Andrew Hurrell at Oxford University was very helpful to me in the early stages of project conceptualization.

Lisa Richey's comments on Chapters Two and Three helped me reshape them, and her work on the global population discourse and population policy in Tanzania have greatly influenced my thinking on recent developments in the population field. I would also like to thank Joni Seager for her comments on Chapter Two.

It would not have been possible to finish this thesis without the support of my colleagues at Hampshire College and in the Five College community. I would especially like to thank my colleague and friend Marlene Fried, director of the Civil Liberties and Public Policy Program (CLPP) at Hampshire, who not only encouraged me to embark on

are in town to do research). Among the many friends who have helped me are Ivan Nutbrown, Jennie Kitteringham, John and Nora Howley, Rajani Bhatia, Jenneke Arens, Martha de la Fuente, Hilary Lloyd, Loes Keysers, Kate Pfister, Neil Stillings, Joyce Duncan, Sam Gladstone, Pam Aselton, Bruce Croft, Posey Gault, Nalini Visvanathan, Cheryl Payer, Corinne Demas, Irene Gedalof, Larry Lifschultz and Rabia Ali.

I especially thank my husband Jim Boyce for all his support, emotional, intellectual, technical and financial, for the duration of the project. I thank my children Jamie and Thomas for putting up with my complaints and for giving me the wonderful distraction of spending time with them. My parents, Tom and Martha Hartmann, and in-laws, Alice and Jim Boyce, were a constant source of strength and good humor, as were many other members of my extended family.

While all these people, and many more, supported my work on this thesis, none of them is responsible for the views therein, for which I bear sole responsibility.

PREFACE

In the mid-1990s, the idea of environmental conflict enjoyed considerable popularity in foreign policy circles, especially in the United States. Its principle architect was Canadian political scientist, Thomas Homer-Dixon. He argued that scarcities of renewable resources such as cropland, fresh water and forests, induced in large part by population pressure, contribute to migration and violent intrastate conflict in many parts of the developing world. This conflict, in turn, can potentially disrupt international security as states fragment or become more authoritarian:

> Fragmenting countries will be the source of large out-migrations, and they will be unable to effectively negotiate or implement international agreements on security, trade and environmental protection. Authoritarian regimes may be inclined to launch attacks against other countries to divert popular attention from internal stresses. The social impacts of environmental scarcity therefore deserve concerted attention from security scholars (Homer-Dixon 1994:40).

Homer-Dixon was first propelled into public view in 1993 when he co-authored an article on "Environmental Change and Violent Conflict" in Scientific American (Homer-Dixon, Boutwell and Rathjens 1993). A year later Robert Kaplan's (in)famous article "The Coming Anarchy" popularized and sensationalized Homer-Dixon's ideas. Proclaiming the environment as the most important national security issue of the twenty-first century, Kaplan presented West Africa as a nightmare vision of things to come: a hopeless scene of overpopulation, squalor, environmental degradation and violence, where young men are post-modern barbarians and children with swollen bellies swarm like ants (Kaplan 1994).

"The Coming Anarchy" seized the imagination of the liberal foreign policy establishment, including Vice President Al Gore and President Bill Clinton. "I was so

gripped by many things that were in that article," Clinton remarked in a speech on population, "...and by the more academic treatment of the same subject by Professor Homer-Dixon...You have to say, if you look at the numbers, you must reduce the rate of population growth" (State Department 1994).

A number of factors converged to make environmental conflict an idea whose time had come. The end of the Cold War was forcing a redefinition of security, and environmental problems, ranging from nuclear contamination to soil degradation, were added to the panoply of potential threats. Monitoring the environment also provided defense and intelligence agencies with a new rationale for the maintenance of expensive satellite and underwater surveillance systems (Deibert 1996).

While environmental conflict fit comfortably into the evolving field of environment and security, it interacted with other policy concerns as well. With the end of Cold War clientism, a series of 'state failures' in the Third World, notably in Africa, posed new challenges to the U.S. foreign policy establishment. In particular, the disastrous U.S. intervention in Somalia highlighted the need for a more anticipatory strategy of preventive defense, addressing the roots of political conflict before it exploded into all-out civil war. Homer-Dixon's model of environmental conflict provided the kind of causal reasoning policymakers were looking for. By emphasizing the role of migration in fomenting conflict, the model also meshed well with growing anti-immigrant sentiment in Washington, D.C.

However, no understanding of either the origins or impact of environmental conflict ideas would be complete without a consideration of the role of neo-Malthusian assumptions, actors and interests. Not only did Homer-Dixon's model of environmental conflict draw heavily on neo-Malthusian beliefs about the relationship between

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population and the environment, but his work was supported by private population-oriented foundations and promoted by senior government officials in preparations for the 1994 United Nations International Conference on Population and Development (ICPD) in Cairo.

There is a party game where pieces of string are laced across a room to create a confusing web. Each person must follow their string to the end, untangling it from others along the way. This thesis follows the population thread, but the tangle is the heart of the story. Only by locating oneself in, around and through all the intersections of the different threads can one unravel the reasons why environmental conflict ideas came to enjoy so much legitimacy and influence in U.S. policy circles.

This process of unravelling has involved crossing disciplinary boundaries and utilizing a variety of methodological approaches, as described in the following introductory chapter. It has also necessitated a combination of different research methods. Along with more standard library and internet-based research conducted in the U.K. (London School of Economics, 1997-98) and the U.S. (Hampshire College, 1998-2002), I have collected documents from relevant institutions and attended meetings and conferences addressing environment and security concerns.[1] While these methods helped me map the environment and security field, and to locate environmental conflict within it, they were not sufficient to understand the complex personal and organizational interactions which allow an idea to gain ascendancy. For this, archival research and interviews were essential.

In September 2000 Thomas Homer-Dixon generously allowed me to spend several days going through his extensive computer and print archives at the University of Toronto, which proved invaluable to understanding the evolution and impact of his three

major projects. Geoffrey Dabelko, Director of the Woodrow Wilson Center's Environmental Change and Security Project (ECSP), also helpfully opened project files to me in June 1999. In general, the ECSP has been a very important research resource. Its annual publication since 1995, the Environmental Change and Security Project Report, provides a guide to the latest environmental security issues and literature, as well as the governmental and non-governmental institutions involved in the field.

In order to understand how an idea comes to hold sway in policy circles necessarily entails listening to the perceptions of those engaged in the process. For this reason, a major part of my research involved interviews with key actors in the environment and security and related fields conducted from 1998-2002. I cast my net wide, interviewing approximately 70 people in government and multilateral agencies, research and policy institutes, foundations, universities, and non-governmental organizations (NGOs) in both the U.S. and Europe (for a list of interviewees, see Appendix A). The European interviews, which were conducted in 1998, provided an interesting outside perspective on the U.S. policy scene; for one thing, there tended to be less interest in and more skepticism about environmental conflict among the people I interviewed in the U.K., the Netherlands and the European Commission in Brussels.

I chose whom to interview on the basis of their known involvement and/or interest in environment and security concerns more generally and environmental conflict more specifically, or in the case of people outside the field, their capacity to shed light on knowledge production and policy processes. Although the list of interviewees is by no means exhaustive, I believe it represents a wide range of key actors and observers. Certainly, the interviews significantly deepened by understanding of the evolution of environmental conflict ideas and the nature of their impact on a variety of institutions.

In my interviews I used a loosely structured approach in which I had a list of central questions but left room for spontaneity on both my own and the interviewee's part. The central questions I asked regarded the interviewee's perception of the linkages between environment and security; the extent of their knowledge of Homer-Dixon's work; and their views on why his work became important, how it impacted policy institutions, and whether or not it would continue to exercise influence as the field itself evolved and the political climate changed. I also tailored questions to the individual's institutional affiliation and experience. For example, I would ask an interviewee from the U.S. State Department how Homer-Dixon's ideas had impacted that institution specifically. Most interviews took from a half hour to an hour and were conducted in person, though eight interviews were done by phone. Although it is obviously an advantage to meet people in person, the phone interviews were lengthy and informative. I was also able to conduct two interviews with Homer-Dixon, one of which took place immediately after I had looked through his archives.

I took notes instead of using a tape recorder in the interest of a freer and more frank discussion. In several cases, people gave me interviews, or portions of interviews, off-the-record. In general, I have identified specific interviewees in the text when their identity is critical to the validity of the information or perspective, but otherwise I have used a description of their position (e.g. State Department official, senior foundation officer) when their exact identity is not required. This is in the interest of safeguarding privacy as much as possible, since it is impossible to know in advance just how sensitive certain information or views are. For date and location of any interviews cited in the text, the reader should consult Appendix A.

Subjectivity, of course, is an intrinsic part of the interview process, from the

selection of interviewees to question choice to the biases of the particular interviewer in the interpretation and presentation of results. When I started the interview process, I worried that my background in population might bias my findings -- that I would be searching for the population thread even when it was not there or only played a minor role, or alternatively, that the people I interviewed would have already pigeon-holed me. Although I have been involved most of my career in reproductive rights advocacy, supporting women's access to high quality, voluntary family planning and reproductive health services, I am also a known critic of neo-Malthusian ideology and population control policies which undermine women's health and rights (e.g., Hartmann 1995).

In actuality, these did not prove major problems. As an interviewer, I found it easier to disassociate from my political subjectivities and to approach each situation with an open mind. To most people I was an anonymous PhD researcher and those who did know my population work often engaged in a more in-depth discussion because of it. The interviews challenged me to look beyond a narrow 'population determinism' in the evolution of the environment and security field in general and in the environmental conflict project in particular. This challenge remains throughout the thesis as I balance my focus on the influence of neo-Malthusianism with a broader analysis of the tangle of actors, interests and discourses which came together in the making of environmental conflict ideas. In my interviews I learned that many people do not explicitly see population as a defining factor, though it is implicit in many of their assumptions. In the U.S. policy context the very 'implicitness' of population is precisely what makes it so powerful; it is part and parcel of the American liberal world view.

This world view is also pluralist, however, and open to considering alternative perspectives. Thus, in the course of my research, I became enlisted in the Global

Environmental Change and Human Security Project (GECHS) based in Canada. This project uses the notion of human security to bring issues of inequality, gender and political ecology into the environment and security field. It is also committed to encouraging more women and Southern researchers to enter the debate. The largely homogenous composition of the field to date (white and male) is starting to be a source of embarrassment.

As a result of my engagement with GECHS and growing acquaintance with others in the environment and security field, I found myself moving from researcher/interviewer to participant observer. This culminated in my attendance at a small International Studies Association Workshop on Environment and Conflict Research, co-sponsored by the Woodrow Wilson Center and the University of California, Irvine GECHS chapter in March 2000. With a number of key protagonists at the table, including Homer-Dixon, I found myself vacillating between wanting to take notes on the discussion for my thesis and actively participating in it. This blurring of the line is no doubt experienced by many graduate students doing research in a field of which they gradually become part. However, the situation was somewhat different for me since I had approached the field mainly as a critical outsider. For example, I had previously published an article critical of Homer-Dixon's model (Hartmann 1998). If the field was open enough to tolerate this criticism, or even welcome it, then what was my role now? The process of engagement has provided valuable insights not only as to how the field constructs itself, but as to how one might go about trying to change it.

In the end, the research process has taught me that there is no one clear way to investigate and comprehend how an idea, and its purveyor, become powerful. I have had to negotiate and balance multiple methodologies and subjectivities, including my own, to

untangle the tangle, and at the end of the day there are no doubt still loose threads. I offer the following account, not as the last word or only true story, but as the fullest and deepest understanding I was able to achieve with the tools at hand.

<u>Endnote to Preface</u>

[1] These include the 40th Annual International Studies Association (ISA) Convention, February 16-20, 1999, Washington, D.C.; the ISA Workshop on Environment, Population and Conflict Research, University of California, Irvine, March 18-19, 2000; and the Conference on Environment and Security: Charting the Way Forward, Center for the Study of Democracy, University of Westminster, London, March 15, 2001.

CHAPTER ONE

Methodological Hooks and Eyes:

Reflections on Knowledge, Power and Policy

Across many social science fields there is considerable interest in the complex relationship between knowledge, power and policy-making. In part, this trend derives from the critical insights of post-structuralism and constructivism which have thrust open the black Pandora's box of agency in the production of knowledge. It is also a response to evolving institutional forms, such as transnational regimes, NGOs and advocacy networks, in an era of rapid globalization.

In this chapter I journey through a number of social science disciplines to find the methodological approaches which are most helpful in understanding the evolution of environmental conflict ideas and their impact on U.S. governmental and nongovernmental institutions. A set of four basic questions has guided my search for relevant approaches:

1) Can one understand environmental conflict as a discourse, both in the broader, dynamic Foucaultian sense of a power center, a bounded area of social knowledge which both constrains and enables thinking and action, and in the narrower linguistic sense of a narrative with a particular story line designed to appeal to policymakers as well as a broader public? How does environmental conflict interact with other past and present discourses on population, environment and security, as well as with North/South representations of race, gender, and immigration?

2) Who are the key actors, and why do they achieve such prominence? Do they form an identifiable configuration, e.g. an epistemic community, discourse coalition or issue network? What does this tell us about the role of agency, including the financial power of private foundations, in the production of knowledge?

3) What is it about the historical moment that allowed such ideas to flourish, both nationally and internationally? Is environmental conflict an example of increasing "securitization" of the social and environmental spheres (Buzan, Waever and de Wilde 1998)?

4) What are the intentional and unintentional effects of environmental conflict ideas? Is there a certain 'strategic intelligibility' (Ferguson 1994) to their unintentional effects? Can one understand that strategic intelligibility only with the benefit of hindsight, or is speculation a worthy project, especially to determine potential sites of contestation?

Because there is no one over-arching methodological hook on which to hang all these questions, I have employed a variety of approaches, crossing back and forth not only between disciplines, but between postmodern, constructivist and political economy approaches. Fortunately, today the boundaries between them are less rigid; there is a general agreement that discourse matters in the study of knowledge, power and policy, though exactly what discourse is and how it matters is the subject of much debate. The danger of a pluralist approach is that one can get spread too thin, while the advantage is that one is able to come at one's material from a variety of different directions, with multiple insights. I have found the advantages to outweigh the disadvantages, especially since as most observers would agree, the relationship between knowledge, power and

policy is by no means clear-cut and is clouded by complexity, uncertainty and contingency. Rather than ignore these factors, it is better to embrace them.

The chapter is divided into six parts which discuss the most relevant approaches I have gleaned from the literature. Part One considers Foucaultian notions of power/knowledge, such as the production of truth, bio-power and strategic intelligibility. Part Two explores the constructivist literature on ideas and policy and related concepts of agency. Part Three looks more specifically at the role of material interests, namely private foundations, in the production of knowledge in the United States. Part Four addresses the politics of representation, particularly the identification of 'threats'; Part Five examines how perceived threats actually get on the security agenda through the process of "securitization." The final part clarifies how these varied approaches inform the main body of the work and presents an outline of the following chapters.

I. IN THE FOOTSTEPS OF FOUCAULT

Foucault's 'archeological' and 'genealogical' studies of power/knowledge formations have deeply influenced much subsequent research on how certain ideas or discourses not only come into being, but function in the world. In this thesis, I draw on three main aspects of Foucaultian theory: the political economy of truth, bio-power, and strategic intelligibility.

The Political Economy of Truth

"We are subjected to the production of truth through power," Foucault wrote, "and we cannot exercise power except through the production of truth" (Foucault

1980:93). Truth for him is a relative concept, the system of rules by which true and false are separated, which takes different forms in different historical periods. How truths are produced is a central concern of my work, and Foucault's notion of a "political economy of truth" has relevance to understanding how environmental conflict became an accepted ideology.

Foucault identifies five major traits which characterize such a political economy in the present era: (1) 'truth' centers on "the form of scientific discourse and the institutions which produce it;" (2) there is a constant demand for truth "as much for economic production as for political power;" (3) it is widely circulated and consumed through apparatuses of education and information; (4) it is produced and transmitted under the dominant control of a few major political and economic institutions such as the university, army, and the media; (5) it is the subject of "a whole political debate and social confrontation," i.e. ideological struggles (131-2).

In terms of political strategy, the essential challenge to the intellectual is not criticizing the ideological contents of current truths, ensuring one's own scientific practice is guided by correct ideology or altering people's consciousness, but rather changing "the political, economic, institutional regime of the production of truth" (133). I would argue that all of these factors are required, and in fact move together as part of a larger political process. Nevertheless, the importance of understanding the "regime of the production of truth" in order to transform it is a point well-taken.

Discourse is central to the production of truth and the operation of power:

> ...in any society there are manifold relations of power which permeate, characterize and constitute the social body, and these relations of power cannot themselves be established without the production, accumulation, circulation and functioning of a discourse (93).

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Discourse must be studied on different levels: archaeologically in terms of its various elements, assumptions and internal logic, and genealogically in terms of the institutional, cultural and social and economic practices which give rise to it (Escobar 1984-85).

The particular instruments used in the formation of a knowledge or discourse are also important to consider; these "methods of observation, techniques of registration, procedures for investigation and research, apparatuses of control" (Foucault 1980:102) are part of the exercise of power. Technique, content and deployment of a discourse are in a sense analytically inseparable since they constantly interact. By extension, in terms of political strategy, it may be that by challenging a particular technique -- a way of collecting or ordering data, for example -- that one finds a thread that helps unravel the discourse or undermines the authority of those who produce it.

Foucault's dynamic understanding of discourse is rooted in his similarly dynamic concept of power as a productive, not just repressive, network which runs through the whole social body (119). Power is employed through a net-like organization and individuals are its vehicles, not just its point of application. He argues for studying power where it is invested in "real and effective practices" and at its extremities, the points where it becomes "capillary", embedding itself in regional and local forms and institutions. Instead of starting from power's center and discovering the extent to which it affects the base, he calls for an ascending analysis of power, working upward from its "infinitesimal" local mechanisms (99). While this approach recommends itself to certain kinds of research, e.g. certain anthropological and historical case studies, my approach is more descending or lateral in the sense of studying across institutions. Indeed, one could argue that studying "the political, economic, institutional production of the regime of

truth" often involves an unapologetic focus on the centers of power.

However, in terms of identifying the impact of certain regimes of truth, it is necessary to look at who is at the receiving end of policy. Here Foucault's understanding of population and bio-power offers some important insights, especially since population figures so prominently in environmental conflict ideology.

Bio-power and Strategic Intelligibility

The development of the concept of population is central to Foucault's work, involving the changing relationship between what he calls the "species body" and the individual body. In the late seventeenth century the human body increasingly came to be seen as a machine, whose capabilities had to be disciplined, optimized and integrated into an efficient system of control. This "anatomo-politics of the human body" paralleled the development of a "bio-politics of the population," which focused on "the body imbued with the mechanics of life and serving as the basis of the biological processes: propagation, births and mortality, the level of health, life expectancy and longevity" (Foucault 1990:139). This marked the beginning of an era of "bio-power," of techniques of control over the individual and social body essential to the development of capitalism. Sex itself became a crucial target, situated as it was "at the juncture of the 'body' and the 'population'"(147).[1]

Although Foucault himself did not write explicitly on the environment, scholars following in his tradition have usefully incorporated his ideas of bio-power into the analysis of contemporary environmentalism. Rutherford maintains that current concerns with ecological problems and crises are an example of the bio-politics of population.

This bio-politics has given rise to a mode of governmental rationality based on the institutionalization of new forms of scientific expertise, largely drawing on global systems ecology and its concern for the population-resources problem, as well as "new techniques for managing the environment and the population that can be termed 'ecological governmentality'" (Rutherford 1999:38). State-centric concepts of power must give way to an analysis of how regulatory science, and its expert bodies, not only legitimize certain state interventions, but perform "a role of epistemic policing, both by framing the definition of ecological risks and by certifying what is to count as scientifically acceptable knowledge of the natural world" (56).

Luke (1999) explores the dark side of this green governmentality with more specific reference to the role of the state, especially American superpower, in the policing of the global environment. Historically, the development of ecology follows the emergence of demography as an administrative science; demography's statistical attitudes "diffuse into the numerical surveillance of nature, or Earth and its non-human inhabitants" (149). Indeed, modern ecology provides governments with the rationale to define all living organisms as endangered populations subject to managerial control. This control accelerates and is intertwined with the rapid expansion of global capitalism in the 1970s. According to Luke,

> To preserve the political economy of high-technology production, many offices of the American state must function as 'environmental protection agencies', inasmuch as they continue to fuse a politics of national security with an economics of continual growth, to sustain existing industrial ecologies of mass consumption with the wise use of nature through private property rights. Conservationist ethics, resource managerialism and green rhetorics, then, congeal as an unusually cohesive power/knowledge formation, whose actions are an integral element of this order's regime of normalization (151).

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While Luke and Rutherford focus on the environmental side of this power/knowledge formation, speaking more about aggregate body politics than individual bodies, feminist scholars have pointed out how the targeting of actual women's bodies in local (though nationally and internationally financed) population control programs is one of the most direct contemporary manifestations of bio-power (Richey 1999). Despite discursive shifts at the 1994 UN Population Conference in Cairo from population control to reproductive health and women's empowerment, population reduction, sometimes through coercive means, remains the central imperative of family planning programs in many countries (Hartmann 2002). Normalized through the science of demography and population planning, the control of women's fertility and sexuality has become the legitimate province of state authority.

The current linkage of population, environment and security could raise the stakes higher -- women's fertility, by causing environmental degradation and violent conflict, becomes a national security threat, justifying the need for greater discipline and surveillance. Because of the ostensible link between population, deforestation, and loss of biodiversity, for example, the United Nations Fund for Population Activities (UNFPA) recently called for the integration of reproductive health and family planning programs with park and forest management schemes (UNFPA 2001:8). A number of such schemes have used violent means to exclude local people from forest resources (Peluso 1993, Neumann 2002), raising the possibility of a direct link between coercive contraception and coercive conservation.

Anticipating such outcomes is an important element of what James Ferguson (1990) calls strategic intelligibility. In his book The Anti-Politics Machine Ferguson's

main aim is not to present a critique of the dominant development discourse on Lesotho (although he does so along the way), but rather "to show that the institutionalized production of certain kinds of ideas about Lesotho has certain important effects, and that the production of such ideas plays an important role in the production of certain sorts of structural change" (xv).

Despite his use of the machine metaphor, Ferguson stresses that there is no mechanistic, deterministic relationship between the discourse of development in Lesotho and its practices and outcomes. Indeed, intentional development planning has many unintended consequences, which, with the benefit of hindsight, have a certain strategic intelligibility (20). Thus, rural development in Lesotho largely failed according to its own terms, but expanded bureaucratic state power in new ways and had the ideological effect of depoliticizing poverty and the state.

In using such an approach, there is a danger that the concept of strategic intelligibility will close a too perfect circle, leaving too little room for contingency and agency and allowing the logic of the present to explain the past. Nevertheless, it is a useful predictive tool, encouraging the researcher to focus not just on the intentional but unintentional consequences of a particular discourse and to identify future spheres and paths of influence and policy impacts. This is somewhat more difficult in the case of environmental conflict ideas since they are not as institutionalized as development planning. It is in the intersections with other more institutionalized endeavors, such as conservation and population control noted above, or military and intelligence activities, that one should look for the strategic intelligibility of environmental conflict ideas.

While these Foucaultian approaches offer important insights, they are not

sufficient to understand the concrete mechanisms by which different actors, with differential access to power and resources, are able to create knowledge and influence public opinion and policy. Foucaultian theory is not agent-less, but it (ironically) tends towards a sort of systems analysis, reinforced by its own circulatory metaphors, where individual actors and subjects can get lost in the grand discursive scheme of things. Constructivism provides a more concrete view of agency, especially the critical role of expert communities.

II. CONSTRUCTIVISM AND THE POLITICS OF EXPERTISE

That knowledge is socially constructed is hardly a new idea, though in recent years the social sciences have turned a more critical inward eye to the complex processes of knowledge production, including the formation of expert communities. Much of this research has taken place under the broad umbrella of social constructivism. This part first looks at constructivism applied to both the natural and social sciences and then at the various types of expert communities identified in the literature: epistemic communities; advocacy coalitions; policy networks, communities and entrepreneurs; and discourse coalitions. It concludes with a discussion of the limitations of constructivism, particularly regarding the role of material interests and deep normative commitments and assumptions.

From Natural Science to Trans-science

Constructivism has roots in the sociology of science, which in the 1970s turned its attention in a more systematic way to an exploration of how scientific theory, method and facts are constructed inside and outside the laboratory (Knorr-Cetina and Mulkay 1983). According to Jasanoff and Wynne,

> A constructivist account of science and technology seeks to understand the role of human agency and cognition, cultural discourses and practices, and social goals and norms in the making of scientific knowledge and technological products. Researchers acknowledge nature's part in controlling the production of scientific knowledge, but that part is considered less determinative and more complex than in other models of science (Jasanoff and Wynne 1998:17-18).[2]

While constructivism embraces a certain "epistemic relativism" that locates knowledge in a specific time, place and culture, it eschews "judgmental relativism," the belief that since all forms of knowledge are valid, they cannot be discriminated amongst (Knorr-Cetina and Mulkay 1983:5).

In fact, by prying open and carefully analyzing scientific practice, one can argue that constructivist scholars are enriching and sharpening it rather than throwing the proverbial baby out with the bath water. They are opening some of the unchallenged "black box" claims and techniques of modern science and discovering a history of "uncertainty, people at work, decisions, competition, controversies" (Latour 1987:4).

Constructivist approaches have also been applied to the overlapping zone between science and policy known as "trans-science," where often in the face of uncertainty, scientists are called on to give answers to hard policy questions or legitimize certain policy options (Jasanoff and Wynne:1998). Not surprisingly, environmental issues involving risk calculation and regulation often occupy this trans-scientific zone,

and they are a prime subject of inquiry.

Constructivist analysis can be applied at many different levels, from laboratory observation and experiment, to peer review and the creation of scientific standards, to issue framing, agenda setting, and discourse analysis, to the formation of national and transnational expert communities, to actual policy choice and implementation (Jasanoff and Wynne 1998). The point is not only to "expose the contingent and relativistic character of knowledge," but to "illuminate how science nonetheless succeeds in acquiring and maintaining cognitive authority in a distrustful world" (Jasanoff 1990:12).

Useful in this latter regard is the concept of "boundary work," the process by which scientific communities establish legitimacy by drawing boundaries between who is acceptable and who is not, between scientific and lay knowledges, and between science and policy. "Boundary objects" meanwhile are issues, such as global warming, which occupy the intersection between scientific and other cultural domains. According to Jasanoff, the creation of new discursive boundary objects is an important way of stabilizing the role of scientific knowledge in policy formation (Jasanoff 1990, Jasonoff and Wynne 1998). Boundary objects are capable of drawing together a number of different research communities, with diverse institutional goals and commitments as well as epistemologies (Timura 2001).

Timura (2001) argues that the concept of environmental conflict is itself a boundary object. Its power derives in part from its ambiguity and vagueness, so that players "from all sides of the political spectrum" are able to enter the definitional debate, with some identifying ozone depletion and global warming as national security threats, others stressing nonrenewable resources like oil and minerals, and

still others like Homer-Dixon emphasizing renewable resource scarcity in the

generation of intrastate conflict:

> While there are areas of convergence, the very vagueness of "environmental conflict" has enabled such a large array of players to join debates. As more players come into contact with environmental conflict as the boundary object, the credibility of environmental security discourse increases (105).[3]

Social constructivism tends to more of a tool kit than an over-arching

theory, and as such, it can be used by scholars of different ideological

persuasions and disciplines and applied to the production of social science as

well as natural science knowledges. Knorr-Cetina (1999) argues, in fact, that the

methods and procedures of the natural scientist and social scientist are

sufficiently related as to make comparisons possible. In the environmental field

the distinctions tend to be even more blurred, for as Lash, Szerszynski and

Wynne observe, a strong link exists between the kind of technocratic approaches

towards environmental problems emerging from both the natural and social

sciences. Since the 1987 Brundtland report (World Commission on

Environment and Development 1987), potentially politically enlarging ideas

such as sustainable development have narrowed into a global managerial

paradigm: "Significantly, these managerial resources included the new resource

of *social* science, conceived in identical epistemic clothing to the natural sciences

-- instrumental prediction and control" (Lash, Szerszynski, and Wynne 1996:4).[4]

One of the main achievements of constructivist research has been the

identification and exploration of expert or knowledge communities in different

fields and at different levels of the policy process. The focus on these groups

stems from a number of broad developments. In disciplinary terms, these include the turn away from narrow rational actor and functionalist models of policy-making in the social sciences as well as the challenge to unitary state-centric analysis in International Relations. The shift also reflects changing political and economic realities, notably government's need for outside expertise in an increasingly complex technological environment; the formation of international regimes at the official level and transnational advocacy networks at the civil society level; and changes in the organization of domestic politics.[5] The following section considers these knowledge groupings in more detail.

Ties That Bind: Knowledge Communities

Epistemic communities, policy communities, advocacy coalitions, issue networks, transnational advocacy networks, and discourse coalitions are among the key knowledge groups identified in the constructivist literature. Although there is overlap between them, the diversity of forms reflects the fact that specific issue or policy areas differ widely in terms of the actors, interests and institutions involved (Haas 2001). Taking one step further, I would argue that one may find a diversity of fluctuating and overlapping formations **within** a specific field such as environment and security, depending on the stages of knowledge production, dissemination, and engagement with policymaking processes. Nevertheless, it is useful to examine each concept discretely, starting with the epistemic community approach.

Epistemic Communities: The term epistemic community was first

coined by Knorr-Cetina, who has also written about epistemic cultures, "those amalgams of arrangements and mechanisms -- bonded through affinity, necessity and historical co-incidence -- which, in a given field, make up how we know what we know" (Knorr-Cetina 1999:1). Peter Haas (1990,1992,1997) popularized the concept in the International Relations (IR) field with his work on the role of transnational experts in environmental regime formation in the Mediterranean basin. Haas describes epistemic communities as the "cognitive baggage handlers of constructivist analyses of politics and ideas." They are transnational, knowledge-based networks of experts in a particular issue area, a "principal channel through which consensual knowledge about causal connections is applied to policy formation and policy coordination" (Haas 2001:11579). With the ability to exert influence on both national and international authorities, epistemic communities are at times able to overcome narrow state interests.

The concept of epistemic community has been criticized on several counts. Sikkink argues that external observers may impose a coherence upon such a community which is more imagined than real (Sikkink 1991). Litfin believes the concept does not adequately explain the source of the community's power, nor provide an adequate theory of knowledge. Exhibiting some of the flaws of functionalism and its variants, the approach "is fundamentally a theory of agency: knowledge-based experts exert power by virtue of their access to information. Power and discourse are thus properties -- rather than constitutive -- of subjects" (Litfin 1994:49).[6] Nevertheless, she does acknowledge that the

approach can provide insights into the concrete mechanisms by which knowledge-based experts exert power.

However, it is not only how epistemic communities wield power that is interesting, but how they come into being in the first place. What is often missing from the literature is an adequate depiction of *intentionality* -- can epistemic communities be intentionally created, and if so, by whom? Another related question is whether they are a relatively recent phenomenon or not.

Epistemic communities are usually associated with a fairly narrow and time-bound international agreement or regime. The following formations are generally more engaged with long-term policy processes.

Policy communities, coalitions and networks: The concept of policy community (or policy network) evolved primarily from the recognition that semi-private institutions were often superseding more conventional democratic instruments in public policy-making processes. Policy communities have generally been defined in terms of their relative stability and shared views (Richardson 2001); they are more institutionalized than epistemic communities and more concerned with concrete mechanisms of governance rather than the production of knowledge per se. They are "powerful client groupings" around issues such as finance, industrial matters and transport (O'Riordan and Jordan 1996:74). Advocacy coalitions are a similar concept. According to Sabatier and Jenkins-Smith (1993), they consist of

> actors from a variety of public and private institutions at all levels of government who share a basic set of beliefs (policy goals plus causal and other perceptions) and who seek to manipulate the rules, budgets, and personnel of governmental institutions in order to achieve these goals

over time (5).

Because of their more limited definition, the concepts of policy communities and advocacy coalitions have less relevance to the more diffuse formations found in the environment and security field.

Of more relevance is the notion of issue networks. Heclo describes them as looser "webs of influence," shared knowledge groupings which concern themselves with some aspect of public policy. Although participating individuals and organizations may possess a shared knowledge base, they do not necessarily agree. "Increasingly," Heclo notes, "it is through networks of people who regard each other as knowledgeable, or at least as needing to be answered, that public policy issues tend to be refined, evidence debated, and alternative options worked out -- though rarely in any controlled, well-organized way" (Heclo 1978:102, cited in Richardson 2001:110-111). While consensus is not necessary, issue networks can both include and exclude, helping to determine who has more legitimacy and access to power. O'Riordan and Jordan (1996) write that policy communities tend to form in situations where governments need the help of NGOs in implementing policy, whereas issue networks are found in more politicized issue areas where resource dependencies are not as clear. Policy communities can exist within issue networks, and since membership in a network is more flexible, there is more space for political contest and change.

However, in his study of the international population network and the creation of the 1994 Cairo consensus on population policy (see next chapter), Halfon argues that consensus plays a larger role in issue network formation and impact than is often acknowledged. His definition of consensus is broader and more complex than a simple

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notion of strategic agreement. "Consensus implies broad commitment to a network," he explains:

> Since the network itself is complex, multiple and contradictory, the consensus is necessarily so. Neither singular or absolute, consensus is rather processual; it is continually under attack and renewal. A network facilitates the process of consensus production because it is both flexible enough to admit diversity yet disciplining: flexible because each node of a network is open to translation and reconfiguration; disciplining because a network gains strength from mutual reinforcement among elements (Halfon 1999:2).

Halfon shows how the concept of women's 'unmet need' for contraception served as a boundary object, allowing diverse agendas, from population control to reproductive rights, to be integrated in the Cairo project, with the end result of disabling more radical framings of women's empowerment. Thus, while entering a network may have advantages in terms of being able to effect change from within, it can also discipline or coopt critics, a point worth keeping in mind in terms of the environment and security field.

Advocacy networks, comprised mainly of activists, are the most overtly politicized network form. In their study of transnational advocacy networks working in the fields of human rights, violence against women, and the environment, Keck and Sikkink write that what is novel about them is how nontraditional international actors are able to organize strategically to create new issue areas and exert leverage over more powerful organizations and governments (Keck and Sikkink 1998:2). Although the environment and security field does not fit this description (its actors are more traditional and not activist in the advocacy sense), Keck and Sikkink's observation that networks "embody elements of agent and structure simultaneously" is pertinent. As "patterns of interactions between organizations and individuals," networks are structures, but

attributed to these structures is an agency that "is not reducible to the agency of their components" (5).

It is partly through discursive practices such as framing that this common agency is forged and shaped. For some authors, the role of discourse is in fact the key element in transforming knowledge into power.

The discursive bridge: Discourse, with its multiple meanings, provides a somewhat shaky bridge between constructivist and post-structuralist understandings of knowledge/power. In her study of the 1987 Montreal Ozone Protocol, Litfin (1994) uses what she calls a *discursive practices* approach. While she draws on Foucault's notion of discourses as power centers, she employs a more limited definition of discourse as "sets of linguistic practices and rhetorical strategies embedded in a network of social relations" (3). She sets out to show how it was not simply 'objective' scientific facts marshalled by an expert community that led to the Montreal protocol, but rather a complex process of moving the discourse of precautionary action from a subordinate position to a dominant one and capitalizing on the compelling image of the ozone hole. The exercise of power in this setting relied on persuasion, not force, on the strategic use of evidence and argumentation.

Litfin acknowledges the role of certain key actors, "knowledge-brokers," who are able to translate the work of scientific and technical experts into language accessible to policymakers, the media and the public. However, she downplays the specific identities of these brokers, including their professional credentials and access to material resources. Instead, it is their discursive competence which gives them power: "More important than the specific identities of the agents of discourse is the content of

discourse" (188). One wonders, however, if she is going too far in the faceless, nameless discourse-determinist direction. There is also a confusion at times between the more narrow linguistic sense of discourse and the Foucaultian conceptualization, between the more concrete text and the more nebulous texture of power.[7]

In his study of ecological modernization in the acid rain policy process in the U.K. and the Netherlands, Martin Hajer formulates the concept of "discourse coalitions." Comprised of a variety of actors such as scientists, politicians and activists with links to diverse forms of media, these coalitions are unconventional in that their members have not necessarily met nor do they share an explicit strategy. What unites them and gives them power is the fact that the "actors group around specific story-lines that they employ whilst engaging in environmental politics" (Hajer 1995:13).

Hajer defines discourse broadly as "an ensemble of ideas, concepts and categories through which meaning is given to phenomena" (Hajer 1993:44). These ideas, concepts and categories, meanwhile, can have diverse roots such as normative or analytic convictions and historical references to myths about nature. Discourse is both a tool with which to identify and construct problems and the context in which issues are understood. What he calls *discourse structuration* is the process by which a particular discourse becomes dominant; *discourse institutionalization* occurs when it becomes embedded in specific institutions, organizational practices or ways of reasoning. This institutionalization in turn encourages the *reproduction* of the discourse, as actors who have been socialized to work within such a frame "will use their positions to persuade or force others to interpret and approach reality according to their institutionalized insights and convictions" (46). Discourse coalitions are successful to the extent that they achieve

both structuration and institutionalization of their discourse.

Additionally, Hajer (1993) makes the point that a particular discourse never exists in isolation, and that in the complex realm of environmental politics actors often use arguments from several different discourses. The common story line that brings a discourse coalition together is often composed of elements from different discourses which have a *discursive affinity*, i.e. they conceptualize the world in similar ways.

However, Hajer (1993) argues that members of a discourse coalition do not necessarily have to share "deep values" (48). There is something of a contradiction here, since the story lines that are so important to the discourse coalition approach may indeed be based on deep values. One wonders, in fact, if it is the story lines themselves which hold the coalition together, or the underlying deep values and/or 'mere' material interests of the actors. The discourse coalition approach also misses out on the question of strategic intelligibility: even if a discourse and its various story lines become embedded institutionally, is the result action on that set of particular issues, or some other outcome which is not specified in advance?

In highlighting how the argumentative structure of particular discourses acts as a catalyst for policy change, Litfin and Hajer are part of a larger community of scholars who believe the *shape* of ideas themselves deserves attention (Yee 1996). Narrative policy analysis, for example, focuses on that shape through the textual examination of the formation and use of concepts, including naming, labelling and binaries; tropes and other stylistic devices; framing; stories and narratives; and explicit and implicit rules of validation (Gasper and Apthorpe 1996). There is a well-developed literature in this field, particularly pertaining to international development,[8] and there is no doubt much to be

gained from the textual analysis of particular discourses.

However, there are also limitations to this approach. As Payne points out, the constructivist focus on how ideas are framed to be more persuasive in policy circles often fails to take into account the disparate power and access to resources of competing parties in 'frame contests.' (One can imagine a situation, for example, where success depends less on discursive competence than on competence in raising funds.) Payne also notes other 'distortions' such as the manipulation of frames by "deceptive, domineering, secretive or powerful advocates" (5), and the ability of certain frames to dominate because they draw on commonly accepted but harmful normative commitments such as xenophobia and racism -- in other words, deep, but sometimes unacknowledged, values.

Although constructivism is not predicated on a level playing field, it tends not to pay adequate attention to both material interests and hegemonic ideologies in the politics of persuasion. It does a better job at painting the specifics of the foreground than elements of the deeper, and often darker, background. The following part fills in some of this necessary background by looking at the pivotal role of material interests, in the form of private philanthropic foundations, in knowledge production in the United States.

III. MONEY TALKS: THE ROLE OF PRIVATE FOUNDATIONS

Private foundations are a major link in the chain joining corporate, academic, public policy and government interests in the United States. In certain fields, such as population, they have served as the key catalyst in the creation of both an academic discipline and a public policy response. Yet until recently, in-depth scholarly attention

to the role of foundations was relatively rare, and foundations themselves discouraged outside research into their internal affairs (Lagemann 1999). This is now changing because of increased social science interest in the production of knowledge, but the lag is noticeable. The challenge in researching the evolution and impact of environmental conflict ideas is making this particular Invisible Hand visible.

In his recent book on American foundations, Dowie (2001) divides the history of American foundations in the last century into three main periods: the first, prior to World War Two, focused on the advancement of formal knowledge, especially in the hard sciences; the second, post-World War Two, involved the foundations more directly in the formation of public policy, both national and international; and the third, starting in the 1960s, saw the foundations take a more proactive role in promoting their visions of social justice. These divides, of course, are somewhat arbitrary and certain patterns are common to all three.

One of the most illuminating studies of foundation involvement in formal knowledge production is Lily Kay's history of the Rockefeller Foundation, the California Institute of Technology and the rise of molecular biology, which spans both the first and second periods (Kay 1993). Financially, Rockefeller was a major contributor to the life sciences before World War Two, with a contribution equal to about two percent of the entire federal budget for scientific research and development. However, it was not only Rockefeller funds which led it to dominate, and indeed define, the field of biology, but its effectiveness in harnessing interdisciplinary cooperation through grants and fellowships coupled with its infusion of sophisticated technology. Kay argues that the foundation's conservative social and political beliefs, including identifying the gene as

the site of social dysfunction, distorted the development of biology itself, leading to a physicochemical focus on proteins and mechanisms of upward causation and ignoring the role of downward causation and interactive processes between organisms and their environments.

Kay uses a Gramscian cultural hegemony framework to understand the mechanisms by which Rockefeller forged a scientific elite in its own interest. In the constitutive processes of consensus formation,

> "power" includes intellectual, cultural, political and economic power; and mental life is not a mere shadow of material life. From this perspective the maintenance of hegemony does not require active commitment by an academic constituency (or by subordinates) to legitimate elite rule. Rather, the two reinforce each other in a circular manner to form a "hegemonic bloc" sustained by formal and informal systems of incentives and power sharing, particularly through half-conscious modes of complicity (10).

Unlike many constructivists, Kay also pays heed to the "negative space" outside the consensus where those with less fashionable views receive less support, while the massive resources available to the chosen fields accelerates their pace and creates "a sense of rapid progress and public excitement", which in turn reinforces the authority of their knowledge claims (281).

Similar processes occurred in the social sciences, where in the 1920s private foundation funding was critical in establishing scientism as the dominant approach. Mimicking the natural sciences, scientism, with its emphasis on positivist methods and quantitative techniques, sought the means to predict and control human behavior. In 1923 Rockefeller money launched the Social Science Research Council, which served as the institutional base for building cooperation among the social science disciplines as well as the catalyst for focusing them on scientism (Ross 1991, Kay 1993). In the U.S.

as well as Britain, Rockefeller officials served a "gate-keeping" role; they did not consider funding proposals which emerged independently, but rather actively encouraged certain people who conformed to their views to apply and then guided proposal preparation. Moreover, in a practice which continues in the foundation world today, they often made their support for a proposal contingent on it getting funding from other foundations and agencies (Fisher 1982).

In the 1950s the Ford Foundation financed the behavioral revolution in American political science, moving the discipline away from political theory and normative questions toward empirical research on phenomena such as voting behavior. The basic goal of Ford's Behavioral Sciences Division was to contain social disorder through adjustments in individual behavior, thus staving off more radical change (Seybold 1982). Ford also invested heavily in international studies programs at this time, with the same behavioralist bias. Its institutional support for programs at major universities (Columbia, MIT, Harvard and Stanford, among them) ensured its influence, though its power was more far-reaching. In a similar vein to Kay, Seybold makes this observation:

> [Ford's] strategic position within the knowledge-producing sector and its role as coordinator of research magnified its influence and permitted it to establish a loose kind of hegemony over research in the area. Over time, its mechanisms of control became increasingly subtle and unobtrusive as the institutional base, which it was instrumental in establishing, matured and gained some autonomy (295).

One of the goals of Ford's support of international studies was to produce policy relevant research as well as a trained cadre of international affairs specialists to serve government and corporate needs.[9] This is representative of the second period of American philanthropy when foundations became more actively involved in the formulation and execution of public policy in what Lagemann (1989) calls "strategic

philanthropy." The growing interest in public policy reflected more profound changes in

the political environment in the U.S.; in the wake of both the New Deal and World War

Two, public policy-making became a much more intentional and calculated effort across

a wide variety of institutions, both at home and abroad.

In the 1960s Lyndon Johnson's Great Society accelerated the technocratic

approach to policymaking. Technically trained knowledge elites -- sometimes referred

to as the new "technocratic class" or "action intellectuals" -- were given increasing

power by the administration to define social problems and their solutions (Fischer

1993).[10] According to Fischer, policy research "became a growth industry for think

tanks[11], research institutes, and management consulting firms," setting into motion a

"revolving door" linking them together with government agencies (25).

Foundations played a major role in funding policy research. For example, the

Ford Foundation gave the public-private hybrid Brookings Institution, one of the most

influential Washington-based think tanks, almost $40 million between 1955 and 1967

(Dowie 2001). High-ranking foundation officials also served on the boards of many

public policy organizations; such interlocking directorates are a key aspect of what

Colwell (1982) calls "the interconnected foundation club" (430).

The rise of the liberal technocratic elite, operating largely free of public scrutiny,

raised the ire of both the Left and the Right in the U.S., though ultimately the Right

decided to pursue a similar strategy. In the 1970s conservative politicians and

businessmen began to realize they needed their own intellectual policy elite to do battle

with the liberals. With corporate and foundation funding, a multi-million dollar network

of conservative think tanks, policy institutes and academic centers was established

(Fisher 1982). By the time of Reagan's victory in 1980, the Republicans had caught up to the Democrats in terms of having a policy elite at their disposal. The net effect, according to Nielsen (1985), was "to fix more firmly in national affairs at the federal level the practice of placing certain key nonprofit organizations, including some foundations, in a strategic position in the processes of policy formation" (57). Ironically, many observers believe conservative foundations have done a more effective job of supporting their policy intellectuals than liberal ones (Dowie 2001).

This may be due in part to the pursuit of novelty which currently afflicts many liberal foundations, as they compete with each other to fund the latest fashion in issue area and drop those which seem outdated. Some of the larger foundations, such as the Pew Charitable Trusts, take a more proactive role, seeking to *create* issue areas themselves. Dowie (2001) notes that proactive grantmaking, in which foundation program officers or paid consultants determine how to address certain social, environmental and scientific problems, is becoming increasingly common, shifting power and decision-making from the nonprofit to the philanthropic sector. "Money has always talked, of course," he writes, "but under a regime of proactive grantmaking it more often tends to dictate" (95). In the battle of ideas, proactive grantmaking throws the power wielded by foundations into sharp relief.

The role of foundations will be explored in more detail in reference to the population field (Chapter Two) and Homer-Dixon's environmental conflict projects (Chapter Five). What this brief sketch indicates is that foundations are often deeply implicated in knowledge production in the U.S., helping to determine the direction of scholarly research, policy studies, and ultimately public policy itself. The hegemony

they exercise is often subtle, so that those who benefit from their largesse are not even aware of their complicity. As gatekeepers, foundations not only let in, but keep out, helping to maintain the "negative space" outside the prevailing consensus. Foundations alone, however, do not comprise the deep background needed to understand the power of certain ideas. The politics of representation, the subject of Part Four, also sheds light on the processes of inclusion and exclusion.

IV. MAKING THREATS: THE POLITICS OF REPRESENTATION

Ever since the publication of Edward Said's Orientalism in 1978, there has been increased attention to how the Third World "other" is culturally produced and represented in a wide range of texts, from the popular to the academic to the speeches and treatises of policy makers. (I use the term Third World in the thesis, along with North/South, even though I am aware of their limitations. The division of the world into these simple categories is actually an example of the politics of representation.) Of particular relevance to this project is how the "other" is not only produced but rendered a threat in what Lipschutz (1999) calls "the political economy of danger."

One of the ways this occurs is through the persistence of certain core negative stereotypes and myths. Karim (1997) defines *topos* (plural *topoi*) as the primary stereotype or reservoir of core ideas and images which functions "as the referential basis of interpretation and is essential in making a textual account seem coherent within a particular culture's norms" (153). Reinforcing *topoi* are "hegemonic myths," those "fundamental propositions or assumptions that are unquestionable within the context of a particular discourse" (Thompson and Rayner 1998:289). These clusters of core ideas,

myths, images and stereotypes often serve to "naturalize" discourses of exclusion, making them seem common sense and apolitical. The goal of critical discourse analysis is to "denaturalize" them by revealing the relation of language to power and privilege (Riggins 1997b:2).

This concern with the politics of representation extends across different disciplines, with critical geography and geopolitics, critical anthropology, critical security studies, and feminist IR theory offering useful insights. The following discussion focuses on these keys insights as they will later figure in analyses of both neo-Malthusian and environmental security discourses.

Territories of Difference

In discourses of security, assumptions about the 'natural' order of things often include 'taken for granted' geographical categories and spaces (Dalby forthcoming 2002). Responding to the fact that geography as a discipline has often been "blind to the politics of its own gaze" (O Tuathail 1996:57), critical geography and geopolitics attempt to lay bare the construction of the spatial formulations of global politics. They challenge foreign policy makers and politicians' "reduction of complex geographical realities to simple strategic entities to facilitate discussion and political action" (Dalby forthcoming 2002: draft p. 7).

With the end of the Cold War, these spatial formulations have lost some of the simplicity of earlier eras. Between 1875-1945, for example, conventional geopolitics focused on natural resource endowments and geography as defining features of a state's global status and territorial ambitions, with parallels to Darwinian notions of biological

competition and the survival of the fittest. During the Cold War years, geopolitics shifted away from geographical and environmental determinism to the central ideological conflict between capitalist and communist political and economic organizations and the "homogenization of global space into 'friendly' and 'threatening' blocs" (Agnew and Corbridge 1995:65). Natural idioms did not disappear, however. For example, the contagion metaphor, in which the spread of Communist revolution was depicted as "a natural epidemiological process" threatening to infect regions in the Third World as well as the U.S. itself, was widely used (75).

With the end of the Cold War, conventional geopolitical categories have become less fixed, and "the strategic geography of proximity and distance" has become more diffuse and less certain, with a consequent blurring of domestic and foreign policy (O Tuathail 1996:189). The decline of the old Cold War order, coupled with the rapid pace of economic globalization and the transition from Fordist to post-Fordist production processes, has led to the phenomenon of "deterritorialization." It is not that the world has become a borderless place, but no longer is the territorial state necessarily the key referent or site of power. However, as O Tuathail (1996) notes:

> every deterritorialization creates the conditions for a reterritorialization of order using fragments of the beliefs, customs, practices and narratives of the old splintered world order...As one order of space unravels, new orders are deployed to retriangulate local foregrounds against global backgrounds into new productions of global space (230).

Gupta and Ferguson (1997) argue that the malaise associated with deterritorialization has had the result of making ideas of culturally and ethnically distinct places even more pronounced. This fetishism of the parochial (ancient ethnic hatreds in the Balkans, barbarian tribal practices in Africa, America as the true *land* of freedom[12])

exists in relationship to an equally fetishized global, where global security, global environment, the global economy are often invoked to mask continuing relations of dominance between North and South.

The salience of old *topoi* and myths, recapitulated and reconstituted into new articulations of national and global security, add a certain deja vu quality to current threat representation. With the disappearance of the Soviet Union as Enemy Number One, the race card in particular trumps all, as the heart of darkness returns to the Third World and there is "a continuing complicity with colonial representations" (Doty 1996:170)[13], whether in the form of the Islamic terrorist, Southern immigrants invading our borders, or the perils of overpopulation. Race also forms a critical link between external and internal threats, with the jungle of the black urban ghetto serving as the Third World within the First.

Most of all it is the dark-skinned immigrant -- whether so-called environmental refugee or economic migrant -- who is the lightening rod for malaise and fear. As Malkki notes, refugees have long been perceived as "an objectified, undifferentiated mass that is meaningful primarily as an aberration of categories and an object of 'therapeutic interventions';" what is "natural" is sedentarism, and displacement is pathological (Malkki 1997:65).[14]

While refugees are aberrations, immigrants are dangerous. Throughout U.S. history successive waves of immigrants have been perceived as threats to both the cultural identity and security of the nation, and racial scapegoating has often been quite explicit. In his study of recent anti-immigrant rhetoric and policy, Shapiro argues this racism is now masked through reference to demographic concerns: "The strange bodies

have become abstracted and assembled, the threat is to the U.S. demographic entity, a 'population'" (Shapiro 1997:3).[15]

However, the "strange bodies" can also be strangely individualized and gendered too. In the U.S. the over-fertile Latina immigrant woman draining national resources is a symbol utilized by the Right; in Italy the figure of the African female prostitute represents dangerous "natural" sexuality out of control, a metaphor for the threat of immigrants to the nation's law and order and moral value system (Angel-Ajani 2000).

In international security circles, as we shall see, it is the *process* of demographically-induced migration itself which is the main threat, not just the identities of immigrants. Like transparencies, these various images of migration overlay each other, forming a particularly powerful meshing of racial, cultural and gender anxieties.

In studying the representation of threats, some texts are clearly more strategic than others, Kaplan's "The Coming Anarchy" (1994) being a case in point. Another is Lester Brown's 1994 report, "Who Will Feed China?," a neo-Malthusian analysis of how China's demand for food will likely lead to global food scarcity (Brown 1994). Boland's study of the report examines how it influenced numerous policy debates in both China and the U.S., even motivating the American intelligence community to investigate its claims through satellite data. "It is the processes of *reinscription* that makes strategic texts politically, economically, and thus ultimately materially significant," Boland writes (Boland 2000:71). Moreover, each reinscription takes into account not only the original question, in this case who will feed China, but interpretations advanced by other commentators, including those in the popular media. Studying the process of reinscription, then, is a more dynamic approach than simple textual analysis alone.

In the politics of representation, one must also be attune to absences as well as presences, to what is not said but is implicitly understood. Feminist IR scholarship has much to offer in this regard.

Gender, Gender, Everywhere and Nowhere

Critical feminist scholarship has done much to challenge conventional notions of security on a number of different levels, including examining how private and public gender roles throughout society sustain national security institutions and ideologies based on masculinist prerogatives of control; broadening the concept of violence to include domestic violence as well as rape as a weapon of war; asking the fundamental question of exactly who and what is being secured by national and international security policies; and analyzing the implicit gender codes in security discourses (see, for example, Dalby 1997, Peterson 1992, Enloe 1989, 1993, 1996, 2000, Tickner 1992, Sylvester 1996). As Enloe notes,

> The Cold War was created and sustained by the flows of gendered forms of power; so too now are its endings -- at the centers, on the margins, along the borders. As in the previous international system, of 1946-89, so too today, those forms of power are not always easy to see, their contestations not always easy to delineate (Enloe 1996:198).

Enloe (1996) investigates these gendered forms of power primarily through what she calls "an explicit political accounting" (200), which resembles Foucault's investigation of the capillary action of power. She looks at the gendered norms which sustain a certain military or security system not only in the board rooms but the bedrooms and in the everyday practices of different social classes and their relationships with each other. While my thesis does not take this approach, it is certainly an

illuminating one, and it would be interesting to cast a critical gendered eye at the human relations which sustain the environment and security field, which is largely a Western male enterprise.

Instead my focus is primarily on the gendered *content* of environmental conflict theories, in which gender issues are conspicuous by their absence. This is not surprising since "the field of international relations is one of the last social sciences to be touched by gender analysis and feminist perspectives," and in fact, the discipline is defined "in terms of everything that is not female" (Tickner 1992:8,129). But how exactly does one locate those absences, listen to those silences?

In her study of the discourse of North American nuclear defense intellectuals and security analysts, Carol Kohn shows how their language is deeply gendered. Anyone who dares bring up the human realities behind the abstractions of death and destruction is considered a wimp; even tone of voice must be carefully modulated and dispassionate. "What gets left out," she writes, "is the emotional, the concrete, the particular, the human bodies and their vulnerability, human lives and their subjectivity -- all of which are marked as feminine in the binary dichotomies of gender discourse" (Kohn 1993:232, also see Kohn 1987).

This concern for the particular and the subjective is also missing from the environmental security field, as we shall see. But it is less a strategy of cognitive and emotional distancing -- after all, in comparison to hard-line defense intellectuals, many in the field are actually liberals seeking to redefine security -- than an unquestioned acceptance of certain stereotypes and assumptions about the Third World. Many of these assumptions are deeply gendered, such as the belief that population growth, a.k.a.

women's fertility, is one of the main causes of poverty, environmental degradation, migration and conflict, or the implicit equation of the feminine with Realist notions of the unruly state of nature and the dangerous anarchy 'outside' (Runyon 1992).

While tackling these assumptions can help reveal hidden gender biases, it is also necessary to look more explicitly at the actual role of gender in the social and economic processes environmental conflict theory addresses, such as poverty and environmental decline. Here the challenge is to bring gender in a more empirical sense, to critique by informing, to not only deconstruct but reconstruct.

In conclusion, the politics of representation must take into account presences as well as absences in tracing and exposing the underlying assumptions which make certain people, places and phenomena into sources of danger and potential threats. One must move beyond text and language, however, to understand how certain perceived threats and not others become an object of actual security policy. As Gupta and Ferguson (1997) note, the politics of otherness are not reducible to the politics of representation alone, and critical discourse analysis only takes one so far in understanding -- and challenging -- very real policy outcomes, such as incarceration of illegal immigrants at the border. The next part looks at the process by which perceived threats actually end up on the security agenda.

V. FROM REPRESENTATION TO SECURITIZATION

> ....there are not only struggles over security among *nations,* but also struggles over security among *notions.* Winning the right to define security provides not just access to resources but also the *authority* to articulate new definitions and discourses of security (Lipschutz 1995:8).

This observation by Ronnie Lipschutz points to the competitive nature of the security field, where there are winners and losers in the battle to get certain threats on the security agenda. In the absence of old Cold War certainties, more players are allowed on the battlefield, but the number of winners is not necessarily more than before. What accounts for success and what for failure?

Buzan, Waever and de Wilde (1998) have developed the conceptual framework of "securitization" to elaborate the processes by which a particular issue or threat becomes an actual object of security policy. They start from the basic premise that security is a self-referential practice; it is not necessarily because something is an actual existential threat that it gets securitized. First, there needs to be a compelling argument (a "securitizing move") why a particular issue is an existential threat requiring emergency measures. For the agent, "the task is not to assess some objective threats that 'really' endanger some object to be defended or secured; rather it is to understand the processes of constructing a shared understanding of what is to be considered and collectively responded to as a threat" (26).

Discursive competence in what the authors call "the grammar of security"[16] clearly matters, though the securitizing move is only half the story. For full securitization to occur there also needs to be an audience which is convinced of the argument and the establishment of emergency measures which could be taken to address the threat. Securitization, the authors stress, is generally not a positive phenomenon since it represents the failure to deal with issues as normal politics. It also tends to reinforce state and elite power. During the Cold War the most progressive and transformative strategy was to *minimize* high stakes security and to return contested issues to the

political realm, unlike today where the trend is to broaden or maximize the security agenda. Desecuritizing issues which have been securitized may, in fact, be a worthy goal (Waever 1995).

Securitization is not limited only to the state level or conventional defense sectors. For example, Buzan, Waever and de Wilde to how intrasocietal violence is being securitized in many Western nations. 'Society' becomes the referent object to be protected, and extreme measures beyond normal police procedures are taken in the war against crime. Waever (1995) notes how in Europe this focus on societal security has the potential of legitimizing repressive measures against immigrants and refugees who are increasingly criminalized. Indeed, this is the case in Italy and also in the U.S.[17]

In the environmental sector, Buzan, Waever and de Wilde (1998) highlight the interaction of two different agendas: the scientific one, conducted mainly by scientists and research institutions outside government who define and predict threats, and the political one which involves governmental and intergovernmental decision-making processes and public policies to address environmental concerns. These overlap in the media and public debate, and "the scientific agenda underpins securitizing moves" (72). Certain scientific actors are also more politically engaged: "these actors will link up with the political actors who have specialized in relating to the field of science; thus a chain forms from science to politics without the two having to meet in their pure forms" (73). Here, the authors are considering mainly natural scientists; arguably, political scientists such as Homer-Dixon who have been actively engaged in environmental security debates can make the leap from the academy to politics with more ease and less risk.

The securitizing moves associated with environmental issues often revolve

around perceived threats not just to the environment per se but to human civilization, posed primarily by the explosive growth in world population and economic activities.[18] The existence of an "international environmental epistemic community" which is the main drafter of threats means that securitizing moves mainly take place at the global systemic level. But while these securitizing moves may raise the profile of environmental issues and move them further into the realm of 'high politics,' the authors believe that in general securitization has been limited at this level. Instead, "successful securitization has occurred mainly at the local level where the actual disasters take place and thresholds of sustainability are passed" (91). However, little concrete evidence is offered to support this claim, nor is the politics of expertise adequately interrogated -- for example, who determines when thresholds are passed and what are the forces responsible. Nevertheless, the authors may well be right that most securitization associated with the environment will play out on the local level, coercive conservation being a possible case in point.

In drawing the distinction between securitizing moves and actual securitization, and the different levels at which securitization takes place, this framework is quite useful for looking at the impact of environmental conflict ideas on policy. But like the other approaches described in this chapter, it is not sufficient unto itself. In particular, it neglects the unintelligible consequences of certain securitizing moves and the interaction between moves in different fields. For example, there are certain overlaps and synergies between "societal securitization' and "environmental securitization," particularly where they reinforce fear and criminalization of immigrants. And it could be that "environmental securitization," even though it happens less in practice, is used as a

justification for policies of convergence where, for example, development and environmental aid is linked to foreign policy and defense objectives.

In the next part, I conclude by looking how the varied approaches explored in this introduction inform and guide the main body of the thesis.

VI. CONCLUSION

The following five chapters all address in some way the complex relationship between knowledge, power and policy as evidenced in the evolution and impact of environmental conflict ideas. Because neo-Malthusianism is such a strong influence, both in material and ideological terms, Chapter Two, "Malleability and Mappability: The Persistence of Neo-Malthusianism in the United States," examines how population control became an important feature of American foreign policy toward the Third World in the post-World War Two period. The chapter explores the central role played by private foundations in forging an academic and policy elite in the population field, creating a 'hegemonic bloc' which would come to exercise considerable power within the U.S. government and international institutions. However, the rise of neo-Malthusianism cannot be understood in material terms alone; its underlying assumptions, complexity of motives, and intersections with Cold War geopolitics, development planning, survivalist environmentalism, and women's rights have made it a particularly powerful discourse with considerable influence not just on policy but popular opinion. It is a living, breathing, constantly adapting discourse in the Foucaultian sense, constituted by specific agents but constituting them as well.

Chapter Three, "Tropical Tropes and Barren Slopes: Degradation Narratives and

Environmental Security," traces a particular neo-Malthusian narrative of the Third World in the evolution of the environment and security field and environmental conflict ideas. The belief that population pressures cause poverty and resource scarcities, which then induce migration and violent conflict, is an unexamined assumption in much of the literature. Along with related narratives such as the youth bulge, it exercises an important function in the post-Cold War production and representation of threats. It is less a discourse than a hegemonic myth or *topos* which naturalizes and homogenizes complex political and economic processes.

In Chapter Four, "Environmental Conflict: Wrong Turns on the Causal Pathway?," I tackle the degradation narrative head-on by presenting an in-depth critique of Homer-Dixon's model of environmental conflict, which has become a strategic text. Unlike some post-structuralists, I do not believe it is enough to show how certain assumptions or discourses have come into being in order to discredit them. Instead, it is also necessary to show how they are empirically wrong and to point to alternative methods of analysis. Here I rely less on the approaches discussed in this chapter than on literature on the political economy of development, conflict and the environment.

Chapter Five, "Circumscribed Heterodoxy: An Account of Thomas Homer-Dixon's Three Major Projects," draws primarily on archival research and interviews to bring into focus the actors and interests which were essential to his success as well as the larger political climate in which his projects operated. In particular, it highlights the critical role of private foundations and powerful personalities in providing material support and policy venues. The chapter also addresses the phenomenon I call "circumscribed heterodoxy," in which the illusion of diversity can mask a politics of

uniformity, both at the project and policy level.

Finally, Chapter Six, "Truths and Their Consequences: Reflections on the Impact of Environmental Conflict Ideas," considers the intentional and unintentional consequences of Homer-Dixon's ideas in order to gain greater insight into the processes of knowledge production, diffusion and function. It analyzes the impact of environmental conflict ideas on key U.S. government and nongovernmental institutions and the nature of the knowledge communities which formed around them. It anticipates their future impact in relationship to evolving trends in threat representation and environmental surveillance and securitization. It concludes with some thoughts on the role of the critical intellectual in challenging powerful ideas and their present or potential effects. Acting as a critic, however, can sometimes make one complicit in the continued expansion of a discourse by reinforcing it as the essential referent. How one engages in criticism strategically is not only an intellectual but a political challenge.

1. One can of course argue that sex, particularly the control of female sexuality, resided at that juncture long before in so-called "traditional" societies; what distinguishes the modern period is the widespread dispersion and institutionalization of controls and their new-found scientific legitimacy.

2. This article is one of the clearest and most comprehensive I have read on the various social science approaches towards science and policy-making.

3. Timura contends that "this vagueness postulate" can be applied more generally to other environmental discourses. The environment itself has become a global "master narrative;" the endangered environment is seen as an object both threatened by human action and requiring human action to protect it (Harper 2001). "A central reason why the environment narrative has achieved its recent "master" status has much to do with the underdetermined, open meanings of many of its core concepts" (Timura 2001:105). For more discussion of environmental narratives, see the July 2001 issue of Anthropological Quarterly 74(3).

4. However, this is not so much a new relationship as an extension of an older one. In his history of U.S. policy elites, Smith notes that

> social science inquiry, perpetually insecure about its scientific status, has historically been guided by a succession of metaphors drawn from the hard sciences. Those metaphors have both shaped the methods of investigation and held out the disputable promise that practical benefits would accrue from social research. Whether social scientists have seen themselves as comparable to medical researchers and public health doctors or to physicists and engineers, they have typically looked to the natural and physical sciences to borrow models for their work (Smith 1991:14).

5. Regarding the latter, Fischer argues that Lyndon Johnson's Great Society ushered in a new period in American politics where liberal reform was professionalized and social science experts given a larger role in defining and articulating socio-economic problems and their solutions. Conservatives soon caught on to the power wielded by these supposedly 'apolitical' experts, and began a counter-offensive which entailed the establishment of a multi-million dollar network of think tanks, policy institutes and academic centers. Today, as a result, "the agenda for policy consideration is increasingly shaped and approved by the private deliberation of elites outside the government" before it enters the more formal political process (Fischer 1993:33).

6. Debates over the extent to which actors constitute discourses and structures, or discourses and structures constitute actors, are also found elsewhere in the literature. In her 'social structural' approach, Finnemore (1996) explores how norms in particular can constitute, create and revise actors and interests. She argues that the constructivist

project needs more conceptual clarity, and should "provide substantive arguments about which norms matter, as well as how, where, and why they matter" (130).

[7.] In his book on discourse analysis of French and British foreign policy on European integration, Larsen examines in more detail the different concepts of discourse, noting, for example, how a particular linguistic discourse can be part of a longer-term, broader discursive formation (a la Foucault) around certain societal themes. Because he undertakes more of a linguistic analysis of foreign policy discourses and focuses more on the state as an actor, his work is not as relevant to the formation of knowledge communities (Larsen 1997).

[8.] See, for example, articles in Apthorpe and Gasper, eds. (1996) and Moore and Schmitz, eds. (1995). Geof Wood's earlier work on labelling in development policy (1985) is an important precursor to this work and moreover, more explicitly acknowledges power relations: the ability of some people to impose labels on others. Escobar (1995) brings a distinctive post-modernist eye to development discourse, though he and others writing in a similar vein have been criticized for not adequately recognizing the diversity of development discourses.

[9.] Ford built this cadre overseas as well. For an account of its role in Africa, see Berman (1982).

[10.] According to Fischer (1993), this liberal reform strategy had five basic steps:

> (1) a group of experts, mainly social scientists, is assembled by a reform-minded president; (2) the experts devote their time to defining and articulating a social or economic problem and spelling out the need for specific social reforms; (3) a larger group of journalists, philanthropists, and business leaders is then gathered to discuss the problem and to develop a consensus capable of broadening the reform coalition; (4) following these exchanges, a report is produced containing all the assumptions, information and arguments on which the reform program would be designed and implemented; and (5) finally, with considerable fanfare the report is communicated to the public as a reform agenda from the "pulpit" of the presidency and through the mass media (26).

[11.] Stone (1999) defines think tanks as "independent (and usually private) policy research institutes containing people involved in studying a particular policy area or a broad range of policy issues, actively seeking to educate or advise policy makers and the public through a number of channels. Generally, these organizations are private bodies -- legally organized as charities or non-profit organizations -- but some are semi-governmental. These organizations are found at the intersection of academia and politics, and they often seek to make connection between ideas and policy" (3).

According to Stone, think tanks are becoming increasingly transnational, part of a global knowledge industry, but still beholden to a large extent on the support of private foundations.

[12]. Campbell (1998) argues that spatial notion of America as the *land* of freedom (and formerly frontier) has superseded a more complex historical understanding of the evolution of the nation. In the wake of the events of September 11, 2001, this reification of a unique spacial identity seems to be intensifying, not diminishing.

[13]. Doty (1996) notes that despite the continuing salience of race, it has received little attention in mainstream IR scholarship.

[14]. Malkki (1997) explores further how these views of refugees are often reinforced through the use of botanical metaphors as part of the process of naturalization.

[15]. Racism is also masked by discussions of the different (and threatening) culture of immigrants. See, for example, van Dijk (1997).

[16]. This "grammar of security" involves following the basic plot line of constructing an existential threat, projecting a point of no return, and elaborating a possible way out.

[17]. Angel-Ajani (2000) has studied this phenomenon in Italy where the linking of race with cultural and national difference "leads to ideas that link particular forms of criminality to gender and country of origin, as if it is the nature of a person to commit a certain crime because of their cultural background or nationality" (343). In recent years, the Italian prison population as a whole has risen dramatically, with a rising proportion of inmates from outside the European Community. (Between 1991-92 alone, the figure rose from 5 percent to over 20 percent.) In the U.S. the two fastest growing prison populations are women of color and immigrants of color, and law enforcement is becoming increasingly militarized, with expanded cooperation between local and state policing agencies and units of the Immigration and Naturalization Service (Bhattacharjee 2001).

[18]. The authors note, for example, that environmentalists have taken over the anti-nuclear lobby's concern about the possible loss of civilization. See Chapter Three for further discussion of this point.

CHAPTER TWO

Malleability and Mappability:

The Persistence of Neo-Malthusianism in the United States

> We reached the west bank of the river [in Dhaka] at dusk...The sand swarmed with people. Rockefeller said nothing for at least twenty minutes. He stood beside an over-turned oil drum, confronted by the chaos so remote from the orderly presentations on the 56th floor of the R.C.A. building. Here at last was what he had come to see, the plain reality of the so-called "population explosion." No statistics, no high-flown sentiments, no handsomely-illustrated brochures or predictions of disaster for mankind; just a lot of people pushed down to the edge of a warm river.
>   "The numbers," he said, "the sheer numbers of it...the quality, you see, goes down."
>
>   -- Lewis Lapham, 1963
>   (cited in Harr and Johnson 1991:81-82)

For the last four decades, population control has been a remarkably stable feature of US foreign policy toward the Third World. Fear of overpopulation has also shaped, and continues to shape, the world view and environmental consciousness of many Americans. The power and persistence of neo-Malthusianism are all the more striking given the shaky theoretical and empirical foundations on which it is based.

Challenges to neo-Malthusianism have come from the Right and the Left, from feminist and Third Worldist movements, but none have proved strong enough yet to dislodge it from U.S. foreign policy and public opinion. Even during the administrations of Ronald Reagan and George Bush, Sr., when the anti-abortion movement accelerated its attack on international family planning assistance and the libertarian Right declared

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population growth a neutral phenomenon, population control continued to be a priority of the U.S. Agency for International Development (USAID). In fact, it may be that opposition from the Right gave neo-Malthusianism a new lease on life by allowing it to appear progressive by comparison.

Neo-Malthusianism has an almost religious power in the United States. It may lack a church, but it has numerous well-funded institutional organs, both private and public, to practice and spread the faith not only domestically, but around the world. On a conceptual level, it has developed a canon which is strict enough to resist challenges, but malleable enough to adapt to new constituencies and issues. It has also generated images and tropes which resonate deeply in the psyches of its believers. If God is not on its side, Nature surely is. Eve is black, primitive, and pregnant, and her reproduction is the Original Sin.

There is no simple explanation for how neo-Malthusianism rose from the status of a minor social movement in the beginning of the 20th century to a major public policy concern after World War Two. Numerous histories have been written about this progression, and my intent in this chapter is not to reinvent the wheel. Instead, I attempt to tease out the central actors, interests, and ideas which have made neo-Malthusianism such a dynamic discourse, in the multiple senses of that word. It is also a highly *mappable* discourse; it can be traced on to almost any social issue.

The chapter is organized into seven parts. Part One presents a short history of the diverse interests that came together to form the neo-Malthusian movement before World War Two. Part Two considers the consolidation of demography as a policy science and why methodologically neo-Malthusianism was able to take root in American social

science. Part Three charts the successful rise of the population establishment, and Part Four addresses why American environmentalism, both ideologically and strategically, has been so influenced by neo-Malthusianism. Part Five looks at changing neo-Malthusian perceptions of women, with particular reference to the 1994 U.N. International Conference on Population and Development (ICPD). Part Six considers neo-Malthusianism in the current era of declining population growth, and Part Seven offers some concluding remarks.

Since it is impossible to cover all this ground in great depth, I am purposefully concentrating on those aspects of the history which shed the greatest light on the origins of the degradation narrative and the environment and security field, the subject of the next chapter.

I. QUALITY AND QUANTITY

One of the reasons neo-Malthusianism is such a malleable and mappable discourse is that the word 'population' itself has no one fixed meaning. Duden charts its evolution from a 'verbal noun'-- "the generative, homesteading action of real people populating a territory" -- at the end of the nineteenth century to its eventual designation as an aggregate, statistical entity, human or non-human, animate or inanimate, which can be observed and studied according to certain rules of probability in both the natural and the social sciences (Duden 1992:147-9).

Because animals, plants and people can all be classified and observed as populations, and because population is fundamentally to do with reproduction, population is a term which allows biological and social processes to co-mingle and conflate. It is also loose enough to embrace issues of both quality and quantity. It is this

interaction between quality and quantity which characterizes the rise of the neo-Malthusian movement in the U.S. in the first part of the 20th century.

As Hodgson (1991) notes, concerns about population which rose in this period were as much about value considerations as demographic trends. More important than the fear of overpopulation per se was the fear of the changing composition of the American population. He uses the founding meeting of the Population Association of America (PAA) in December 1930 as a lens through which to view the diverse ideological trends which came together, somewhat uncomfortably, under one tent. He identifies four main factions: the immigration restrictionists, who worried that a new generation of non-Anglo-Saxon immigrants would alter the American 'character'; the eugenics movement which blamed a whole range of social ills on heredity and sought to limit the breeding of the unfit (and increase the breeding of the fit); birth control advocates such as Margaret Sanger; and population scientists from diverse academic disciplines.

There was considerable overlap between these factions. Immigrations restrictionists were often eugenicists, the birth control movement itself had abandoned its feminist roots for an alliance with the eugenics movement (Gordon 1977), and many population scientists were not immune from eugenic and racist thinking. What Hodgson terms "biological Malthusianism" was more prevalent at this time than neo-Malthusian worries about the aggregate impact of population growth on resource availability. As the Caldwells write, "It was the differential rate of reproduction by social class and supposedly related inherent characteristics of intelligence and character that had brought most of the real professionals to the study of fertility" (Caldwell and Caldwell 1986:7).

The New York University sociologist, Henry Pratt Fairchild, a leading academic racist of the period, became the PAA's first president (Donaldson 1990:20), and the mission statement adopted at the first meeting called for dealing with America's population problem "in both its quantitative and qualitative aspects" (Hodgson 1991:9), language which remains to this day.

The relative weakness of neo-Malthusianism in this period was due to a number of factors. Barrett notes the difficulty of overcoming a long history of belief in the power of a large population. This problem could not be surmounted until collective welfare became defined as an aggregate of individual welfare and economic well-being made the main measure of national strength (Barrett 1995:34). The neo-Malthusian movement was also initially weaker in the U.S. than in Europe, and in the U.S. the economic and sexual radicalism of some of the early birth control proponents did not appeal to academic and policy elites, nor to the suffragist movement which wanted to present itself as socially acceptable. The famous American radical Emma Goldman supported a sort of socialist neo-Malthusianism, urging the working class to use contraception in order to restrict the reproduction of new workers and thereby increase its negotiating power with the capitalists. Like Goldman, Margaret Sanger's support for birth control was initially framed in radical terms, and included calls for sexual liberation (Hodgson and Watkins 1997, Gordon 1977).

Lack of suffragist support, coupled with increasing state repression against socialists before and during World War I, helped to dissipate this radical tendency in the American birth control movement. However, concern for the welfare of the poor, especially poor women, remained a recurring theme. The eugenics movement was much

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more successful in securing establishment patronage; its funders included the Carnegie and Rockefeller foundations and the wealthy Kellogg and Harriman families. World War One further eroded support for neo-Malthusianism because governments wanted to increase their birth rates to compensate for heavy human losses and to rebuild national strength (Barrett 1995:138).

To build their fledgling movement, more conservative neo-Malthusians made an alliance with Margaret Sanger's "birth controllers," and they joined forces in 1922 to hold the Fifth International Neo-Malthusian and Birth Control Conference which included representatives from Asia. Birth control was presented as a way to increase living standards in the poorest and most congested parts of the region. Attendees also advocated a "negative eugenics" in which contraception could decrease the number of "defectives" from inferior stocks (Barrett 1995:140).

In order to obtain what Barrett calls "world-polity endorsement" for their cause (162), neo-Malthusians began to move away from individual welfare arguments for population control towards rationales based on security and 'scientific' management. The delegates at the Fifth International Conference directed an appeal to the League of Nations to form a commission to study birth control because population pressure "was one of the principal and most fruitful causes of war" (142). This reasoning largely derived from the concept of Lebensraum, the notion that population pressure could force nations to expand beyond their borders to find adequate living space (Wilmoth and Ball 1992). American demographer Warren Thompson warned in 1929 that population pressures in Japan, Italy and Germany could cause another war (Donaldson 1990).

Future neo-Malthusian conferences framed population in a 'scientific' light,

discussing, for example, how to determine a scientific "population optimum" and the nature of the relationship between population and resources. This emphasis on science led neo-Malthusians closer to eugenic interests, since at the time eugenics was the main 'scientific' venue for population studies. In 1928 the Milbank Fund provided support for the formation of the International Union for the Scientific Investigation of Population Problems (IUSIPP), after which no further international neo-Malthusian conferences were held. In 1935 IUSIPP organized a conference in Berlin which was largely sympathetic to the eugenic theories of the Third Reich. The president of the meeting, Eugene Fischer, ended his introductory speech with a rousing tribute to Hitler (Barrett 1995).

Received wisdom has it that the Nazi atrocities ultimately discredited eugenics and that its influence greatly diminished in the post-World War Two period. However, in her study of the Rockefeller Foundation and the rise of the new biology, Kay argues that eugenic ideas of selective breeding continued to remain central to the elite vision of scientific and social control of human behavior after the war, and still exert considerable influence today. "Dredged from the linguistic quagmire of social control, a new eugenics, empowered by representations of life supplied by the new biology, came to rest in safety on the high ground of medical discourse and latter-day rhetoric of population control" (Kay 1993:277).

A number of prominent post-war population alarmists, notably William Vogt and Garrett Hardin, openly espoused eugenic ideas. "There seems to be little danger of society's being deprived of something valuable by the sterilization of all feeble-minded individuals," Hardin wrote in his 1949 biology textbook (Hardin 1949:612, cited in

Chase 1977:374). More recently, Hardin has received funding from the Pioneer Fund, the major financier of eugenics research in North America (Hardin 1993). Scientific racism did not die during World War II, it only went into hibernation (Chase 1977), and in fact, today it is still operative in certain conservative population and environment circles (Bhatia 2002, Southern Poverty Law Center 2002).[1]

As Furedi notes, apprehensions about population quality often exist in a "dynamic relation" with concerns about population quantity (Furedi 1997:19). I would also argue that these apprehensions are often implicit, even if not explicitly stated, in much neo-Malthusian literature. It is important not to lose sight of this in considering the rise of neo-Malthusianism as a major policy concern.

II. DEMOGRAPHY AND SCIENTISM

In the aftermath of World War Two, the political climate became far more favorable to the spread of neo-Malthusian ideas. While the expansionary drive of the Axis powers gave some credence to the concept of Lebensraum, the nuclear bomb at least partially put to rest the belief that military strength is mainly a function of population size (Barrett 1995).[2] Decolonization, the New Deal legacy of social planning, and the need to rebuild war-shattered economies and create new mechanisms of global governance, such as the U.N. and the Bretton Woods institutions, all fostered a new culture of modernization in which concerns about demographic trends figured more prominently. Meanwhile, it was objectively the case that population growth rates were rising in many countries, particularly in Asia, and the 'baby boom' was beginning in the

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U.S. Increasingly, neo-Malthusian concepts concerning the relationship between population and resources became the primary perspective on population (Barrett 1995).

In recent years a body of critical literature has emerged on the evolution of demographic transition theory and its key role in moving neo-Malthusianism from the margins of the U.S. foreign policy establishment into the corridors of power. This literature also provides important insights into the critical interface between academia and public policy in the U.S. and the role of strategic philanthropy in the creation of expert communities.

Transitioning the Demographic Transition

Although earlier versions existed before World War Two (Szreter 1993, Hodgson 1983), demographer Frank Notestein at Princeton University is largely regarded as the father of modern demographic transition theory. Notestein was based at the Office of Population Research (OPR) at Princeton University, which was to become a key institutional link between academic demography and population policymaking.

The OPR was founded in 1936 with the help of the millionaire eugenicist Frederick Osborn who secured funding from the Milbank Fund. Later patrons included the Carnegie Corporation, and especially in the post-war years, the Rockefeller Foundation (Ross 1998, Szreter 1993). From its inception, the OPR was focused on the demographic dimensions of foreign policy issues, and during the war the U.S. State Department was its most important client (Szreter 1993).

In the early 1940s, Notestein and fellow demographer Kingsley Davis articulated a version of demographic transition theory closely tied to the process of industrialization. In the first stages of industrialization countries were likely to experience rapid

population growth since fertility remained high while mortality levels fell due to rising living standards and technological and infrastructural improvements. As industrialization and modernization proceeded, fertility levels would also decline because of urbanization, changing family structures, consumerism, individualism and the decline of fatalism. Notestein first publicly presented this theory in 1944 to a meeting of planners concerned with the problems of organizing postwar food supplies and trade. Like Rostow's stages of growth, the theory fit well with the imperatives of a liberal, democratic, free-market reconstructionist strategy: Western-style industrialization was the key to solving the deep economic and political problems faced by poor countries emerging from the yoke of colonialism (Szreter 1993). Grounded in U.S. triumphalism, it was an optimistic formulation,

> a recipe for promoting the development of Asia, Africa and Latin America that confirmed both the superiority of the Western way of life -- after all, it was this, the demographers argued, that had brought fertility rates down -- and the wisdom of exporting Western practices to the less fortunate parts of the world (Greenhalgh 1996:37).

Within the space of a few years, however, the theory underwent a major transformation. By the early 1950s, Notestein and colleagues began to identify rapid population growth in poor countries as a serious brake on development, and fertility control as a prerequisite for, not consequence of, successful industrialization. The focus shifted from social change and the structural determinants of fertility to individual reproductive behavior. Peasants were discovered to be rational beings who just needed appropriate instrumentalities to reduce their family size (Hodgson 1983).

Why this transformation took place is a subject of much discussion among historians of demography. Szreter underlines the importance of a trip Frank Notestein

made to the Far East in 1948 as part of a team sponsored by the Rockefeller Foundation, after which he came to believe in government-sponsored birth control policies. Even more influential, Szreter argues, were the victory of the Chinese Revolution and the testing of the first Soviet atomic bomb in 1949: "In the course of late 1948 and 1949, those in the United States still dreaming of a globe emerging from colonial servitude into a regime of liberal democratic free trade were awakening to a nightmare, experiencing a strong sense of loss of control in a dangerous and alien world" (Szreter 1993:676).

The U.S. policy establishment now began to consider underdevelopment in peasant societies such as China as creating conditions conducive to Communism, and wanted to find ways to alleviate those conditions as rapidly as possible. The old model of industrial gradualism no longer worked. Hodgson notes that once the Soviet Union became the enemy, it was also difficult to sustain the initial version of demographic transition theory since the Soviet Union was the prime example of planned and rapid industrialization (Hodgson 1988:46).

Most observers agree that the transition in transition theory has to be viewed in light of the tension between demography as an academic discipline and policy science. Neither version of demographic transition theory holds up very well to historical research and empirical scrutiny, yet both exercised tremendous influence.

Demeny explains how historically demography has always bridged the gap between social science and social engineering since it originated in the art of "political arithmetic" and its main base has been government agencies interested in statistical information (Demeny 1988:10). However, how it got from there to playing the role of "handmaiden in family planning programs" (24) has to do with the close connections

between corporate wealth, private foundations, government agencies and academic centers in setting the U.S. policy agenda. The creation of the Princeton OPR itself is a prime example of this phenomenon.

Demeny and others rue the way American demography, with a few exceptions, sacrificed academic rigor and objectivity to the needs of its paymasters. This partly results from institutional insecurity: originally, demography was not an academic discipline and had to construct itself as a science. Without assured support from the academy, it became dependent on its major clients -- governments, foundations and international agencies -- for funding. According to Greenhalgh, "demography has had to operate primarily as a policy-relevant field, tailoring its work, and its theories, to the needs of its clientele's agenda for action" (Greenhalgh 1996:31). With the advent of the Cold War, that agenda was increasingly framed in terms of crisis, especially in Asia, and crisis research, as Hodgson notes, favors policy research over stricter academic treatment (Hodgson 1983:2).

The new version of demographic transition theory helped provide the ideological rationale for U.S. intervention in Third World population issues. In turn, the growth of a "population establishment" provided numerous career opportunities for demographers and the funding necessary to set up academic/policy centers for population teaching and research in a number of U.S. universities as well as overseas (see Part Three). This symbiotic relationship mitigated against critical thinking. In the scathing words of Demeny, demography's subservience to population orthodoxy and the family planning industry generated research "that the sponsor already knows to be revealed truth. Research so characterized is an oxymoron" (Demeny 1988:29).

Yet even if demography had been more independent, there were elements in its construction as a science which would have probably proved compatible with neo-Malthusianism. In fact, many of the assumptions and methods of mainstream American social science lent themselves well to the new population orthodoxy.

Madness in the Method

In her book on the origins of American social science, Dorothy Ross identifies scientism as one of its central flaws. "What is so marked about American social science is the degree to which it is modeled on the natural rather than the historical sciences and imbedded in the classical ideology of liberal individualism" (Ross 1991:xiii). Positivist scientific method became the chief mode of inquiry, an approach which ensured distance from political controversy and encouraged production of knowledge geared toward prediction and control. At the same time history was transformed into 'natural history', a history of cycles, types and species, and metaphors of nature were used to describe human actions. As noted in the previous chapter, foundation investments, particularly from the Rockefeller Foundation, strengthened the professional base of scientism.

As one of the most quantitative social sciences, demography was heavily infused with scientism. Szreter analyzes how the "covering laws" school of thought influenced Notestein and the field in general. This deductivist school

> assumes that all relevant initial conditions circumscribing the subject of study can be specified in advance and it can therefore be conceived as a closed system. The methodology is then capable of yielding calibrated information on the mutual cause and effect relationships between the entities in the system. It recognizes no distinction in principle between the scientific study of social and of natural phenomena. It asserts that explanation and prediction are essentially two sides of the same coin, and therefore to explain gives the power to control (Szreter 1993:690).

Mainly employing techniques of statistical association, which became ever more possible and popular with the development of computer technology, this approach led to a seriously circumscribed, ahistorical view of fertility change conducive to neo-Malthusian over-simplification; it was not capable of dealing with "radically indeterminate phenomena and relationships" such as values, motives and social roles (692). Its strength was its kinship with policy science and its utility to policymakers seeking quantifiable predictive information on which to base interventions. Elements of American political science also lent themselves well to neo-Malthusianism. Its 'natural history' approach to social systems gave rise to simplistic typologies: the modernizing elites, the traditional peasants, the urban mobs. In keeping with elitist theories of democracy, personalities and cultures were viewed as the main obstacles to change, not economic and political institutions. Yet change itself was problematic. Failing to acknowledge that the rise of capitalism in the West had led to intensified social conflict, mainstream American political scientists were deeply hostile to mass-based political movements in the Third World. Their conservative vision of liberal democratic equilibrium did not include mass participation.

This fear of participation had both qualitative and quantitative dimensions. American political scientists tended to view the mobs and masses as largely undifferentiated, irrational and politically untrustworthy. Only the elites, who were called upon to manage social change, had positive political agency. The increasing numbers of the unruly masses, meanwhile, threatened the adequacy of political institutions to contain their demands (Gendzier 1985). Hence, fear of the masses could easily translate into concerns about population growth.

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Although economists proved somewhat more resistant to neo-Malthusianism (Furedi 1997), critics pointed to a "a powerful cult of population control" emerging in the profession in the 1960s (Wilbur 1979:55). This 'cult' had three central hypotheses: 1) the rate of growth of population and per capita GNP are inversely related; 2) large expenditures on preventing births make sense economically; and 3) investments in population control are much more productive than investments in direct production. Although these hypotheses were later challenged, they exercised considerable influence on aid agencies and made their way into many introductory textbooks on development economics.

According to Wilbur, methodologically, economics has certain limitations which allowed neo-Malthusianism to take hold in the discipline to the extent that it did. Like other American social sciences, economics is heavily influenced by natural science: hypotheses are deduced from a theory or model, and then predictions based on the hypothesis are tested against empirical evidence. But unlike natural scientists, economists are insulated from the failure of their predictions by the ceteris paribus clause and by fact that researchers can always blame their data or massage it if the results do not come out right.

The structure of neo-Malthusian theory makes it even harder to prove its propositions false:

> Its survival and attractiveness derive from the theory's tendency to shift from interesting empirical, though false or misleading, propositions to true, though empty tautologies. For example, from the *truism* that population growth is limited by food supply, Malthus deduced the empirical proposition that population growth is *regulated* by the food supply. However, when confronted with evidence that the food supply was *actually* growing faster than population, he retreated to a comparison of *potential* differences: in the long run population has a

tendency to grow faster than the means of subsistence. Thus an apparent falsification can always be sidestepped by comparing a long run abstract potentiality (population growth) with concrete data (food supply, per capita GNP, etc.)...This ability to avoid falsification (empirical refutation) certainly accounts for some of the continued vitality of Malthusianism (Wilbur 1979:58).

Wilbur also notes how ideologically, the combination of neo-Malthusianism with competitive economic theory led to a focus on individual and household behavior: people are poor because they made the wrong fertility choices, and therefore, economic institutions are not to blame.

While the field of demography was its main site, the cross-disciplinary appeal of neo-Malthusianism helped it become part of more general development theory, which in turn had its own normative and methodological predispositions towards the focus on population (see next chapter). Scholarly success boosted political success and vice versa, as neo-Malthusianism came not only to reside in the ivory tower but the White House. The creation and influence of the politically powerful population establishment is the subject of Part Three.

III. THE RISE OF THE POPULATION ESTABLISHMENT

Numerous accounts of the formation of the population establishment have been written from a variety of perspectives (e.g., Barrett 1995, Demerath 1976, Donaldson 1990, Gordon 1977, Mass 1976, Piotrow 1973, Warwick 1982). Rather than try to reproduce that history, here I highlight the key processes which made population into a major public policy concern in the U.S., processes which are also relevant to the evolution and impact of environmental conflict ideas. These are: 1) strategic philanthropy and institution building; 2) message dissemination; 3) mappability; 4) organizational diversification; and 5) the convenience of mixed motives.

Strategic Philanthropy and Institution Building

Private foundations, most notably Rockefeller and Ford, were instrumental in setting up the initial institutional structure of the population establishment. After World War Two, both John D. Rockefeller III and the Rockefeller Foundation became deeply involved in the Princeton OPR, centering their interest mainly on the Far East (Szreter 1993). When the foundation proved more reluctant to become directly involved in fertility control, JDR III pushed ahead, calling a meeting of thirty prominent U.S. conservationists, Planned Parenthood leaders, demographers and development experts to a population conference in Williamsburg, Virginia in 1952. At this conference the Population Council was born, ultimately merging demographic, contraceptive and policy research into one premier institution.

During the 1950s, the Ford Foundation concentrated its population assistance on the Council, providing about half of this budget until the mid-1960s. Ford created its own official Population Program in 1963, though before that time it had started to give

family planning aid to India. According to the Caldwells, India played a unique role in promoting interest in population issues. Not only did the country have a sophisticated census system, but neo-Malthusian ideas had a long history there and had taken root among the Indian elite. Presiding over the Sixth International Conference on Planned Parenthood in Delhi in 1959, Nehru emphasized India's population problem and the need for a major family planning effort (Caldwell and Caldwell 1986, Caldwell 1998). In 1952 India became the first country in the world to launch an official family planning program.

The most enduring contribution of the Ford and Rockefeller foundations to the population field was the successful creation of an international academic and policy elite invested in fertility reduction as a national development strategy. One does not have to be a conspiracy theorist to recognize the way this network of experts was intentionally created. Foundation money spawned the establishment of population centers at major U.S. universities. These centers existed in a semi-autonomous relationship with more traditional academic departments such as sociology. Recipients of funding included the Universities of Michigan, Wisconsin, Chicago and North Carolina; Johns Hopkins and Harvard public health schools; the London School of Economics and Political Science; and the Australian National University. Population centers were also set up in a number of developing countries, though the main trend was to bring foreign students to the U.S. on fellowships. The availability of fellowships directed U.S. students toward the population field as well (Caldwell and Caldwell 1986).

This strategy proved highly successful. Many of the experts who played decisive roles in persuading their governments to embrace neo-Malthusian policies had studied in

Ford Foundation-funded population centers. While the courses offered there persuaded

students of the urgent need to reduce birth rates, the centers also

> quite clearly developed a 'hidden curriculum.' The interaction
> between students and faculty and between students themselves, as well as
> the very fact of the programs, led most students into a stronger feeling
> that they had possessed on arrival that they were part of a movement to
> reduce fertility levels. Some also saw it as a new and successful
> profession but even they almost always experienced ideological
> conversion...(Caldwell and Caldwell 1986:140).

Greenhalgh (1996) is far more critical of the population centers than the

Caldwells. While the centers' independent stature within the university permitted

demographers to blend academic and applied research, their relative isolation reduced

the possibility of contact with other scholars and intellectual developments in the social

sciences. For example, most demographers were not exposed to critiques of

modernization theory in the late 1960s and 1970s. The centers also allowed donors to

channel funds to Third World family planning efforts in a more surreptitious manner,

thereby avoiding charges of U.S. imperialism.

While private foundations were instrumental in creating the institutions of

"ideological conversion," they also were adept at packaging and promoting the message

so it appealed to a broader audience.

Message Dissemination

Most large private philanthropies in the U.S. are very skilled at the art of the

report, and the population field is no exception. An early example is the report produced

at the end of the Rockefeller team's trip to East Asia in 1948, which was distributed

widely to government officials, foundation directors, military officers and leading

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academics. Written in subdued scholarly language, the report nevertheless conveyed a

sense of crisis about the growing problem of population pressure in the region. As

Sharpless notes:

> This scenario became a common ritual throughout the 1950s.
> There would be a number of foundation-sponsored "demographic
> missions" to Third World countries led by prestigious demographers.
> The U.S. government, while keeping its distance, would quietly assist
> them in their passage. They would meet with high-level officials
> highlighting the importance of the "population problem." They would
> return home to produce a report which would be distributed free of
> charge to the policy making elites in the United States and overseas
> (Sharpless 1997:181).

The power of such reports lies in the shrewd way they condense and shape research

findings and present policy recommendations while appearing to be academically

rigorous and objective. A number of the reports produced by Homer-Dixon's projects

fall in this category (see Chapter Five).

The 'expert proclamation' was another way the population message was

disseminated to a wider policy audience. In 1960, for example, scientists from 19

countries, 39 Nobel Prize winners among them, issued an alarmist statement calling for

the U.N. to lead the population control cause in order to stave off a new Dark Age of

Malthusian misery and war (Barrett 1995).

Such reports and statements were not sufficient, however, to build the kind of

broad popular consensus necessary to sustain massive and long-term U.S. investment in

population control in the Third World. That, according to Wilmoth and Ball, depended

on the coverage of population issues by popular magazines, newspapers and other forms

of media. Their study of the population debate in American popular magazines from

1946-1990 highlights the remarkable rise in articles about the "threatening" aspects of

population growth, which peaked in the mid-1960s. By contrast, the percentage of articles which took a more neutral stand or viewed population growth as advantageous declined. Interestingly, many of the articles were either written by or cited the work of prominent demographers such as Kingsley Davis, Philip Hauser and Irene Taeuber (Wilmoth and Ball 1992); the population centers created at American universities served as a source of ideas for journalists and authors (Caldwell and Caldwell 1986).

While there was a certain intentionality to the way the neo-Malthusian message was crafted and spread, the ease with which it could be mapped on to other areas of concern, especially the Cold War, was also a key to its success.

Mappability

Discourses of danger have long been a feature of U.S. foreign policy, although as David Campbell argues, the precise source of danger and the identities it is believed to threaten have changed over time. The articulation of danger through foreign policy helps to create "an imagined political community" at home and to secure the identity of the state (Campbell 1998:12-13). Fear and loathing of the 'other' forges a bond between the chosen people.

The last chapter considered threat representation in the post- Cold War era, in particular the focus on refugees and immigrants. While the enemy -- the Soviet Union and other Communist states -- was more clearly defined during the Cold War, "the absence of order, the potential for anarchy, and the fear of totalitarian forces or other negative elements -- whether internal or external -- that would exploit or foster such conditions" (Campbell 1998:30-31) more generally undergirded U.S. foreign policy.

Framed in terms of crisis or apocalypse, neo-Malthusianism mapped well onto

Cold War discourses of danger, a fact which did not escape its proponents. There was an element of opportunism involved in the use of Cold War rhetoric to build support for population control. For demographers eager to get involved in the policy arena, it expanded the market for their ideas (Greenhalgh 1996), and it also helped to justify the need for public funding of the population enterprise (Sharpless 1997, Furedi 1997).

Yet opportunism alone cannot explain the synergy between neo-Malthusian and Cold War ideologies. Furedi argues that concern with differential fertility rates between groups, countries and regions, combined with the state's demand for security, gave demography its geopolitical dimension ("strategic demography"). According to him, the main form that concern took after World War Two, and still takes today, is fear of the rising populations of Southern countries. The Cold War "allowed this threat to be made more intelligible to a larger audience than before" (Furedi 1997:68), yet the threat was not always acknowledged explicitly. He maintains that neo-Malthusian arguments about the relationship between population growth and poverty were used to obscure the goals of strategic demography.

Certainly, one can find many examples of differential fertility fears in the Cold War literature. Demographer Kingsley Davis warned that "superior population growth will join territorial expansion in increasing communism's share of the world." China in particular was a menace, with its "ocean of humanity" driven by a communist elite, potentially making it "the strongest contender for world leadership" (Davis 1959:108-110, cited in Wilmoth and Ball 1992:647).

Yet one can over-emphasize the role of differential fertility. Rather than making nations strong, the more common argument, supported by revisionist demographic

transition theory, was that population growth would impede the modernization process. This in turn would weaken countries, making them more susceptible to communist influences. There were two ways to fight the Cold War: military strength and modernization, and population control figured prominently as a strategy to accomplish the latter. India, particularly, became a test case, where it was hoped the combination of democracy, economic growth and family planning would stave off revolution (Ross 1998). Population control also figured in securing U.S. access to Third World raw materials and markets, since this access would be imperiled by population-induced disorder (Donaldson 1990).

Neo-Malthusian arguments, in fact, were increasingly deployed to mask the structural inequalities which gave rise to disorderly opposition movements. Especially in the latter stages of the Cold War, population growth was identified as a major source of political instability because it drained government resources, caused rural to urban migration, led to 'youth bulges' in the population (and young unemployed men were the tinder for political extremism) and left governments with little other choice than to become authoritarian to control restive populations (see, for example, Population Crisis Committee 1983).

Family planning also figured centrally in domestic Cold War cultural constructions. The white, middle-class, suburban family, managed by a modern housewife who efficiently controlled her fertility, was portrayed as a major defense against the evils of communism. When transferred to the Third World context, family planning similarly became part of the spread of "modern attitudes" which would foster economic development and thwart communist support (Sharpless 1997).

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Opportunistically or not, neo-Malthusianism mapped well onto the Cold War, helping to transform and shape that map into a broader, gendered geography of social control which has survived the fall of the Berlin Wall. By the time the U.S. government became officially involved in population control in the 1960s, that map hung securely on the wall.

Organizational Diversification

While private foundations and Cold War ideology helped propel neo-Malthusianism into U.S. foreign policy circles, its ultimate success as a publicly funded, bureaucratic enterprise lay in the way it became embedded in diverse U.S. government branches and agencies. This occurred through a combination of factors, including the legitimation provided by the high-level Draper Committee; the growing cultural acceptance of birth control; strategic appointments in the State Department; Congressional hearings; the involvement of national security agencies; and the institutional home provided by the USAID's population program.

In 1958 the Eisenhower administration set up the President's Committee to Study the United States Military Assistance Program, under the leadership of William H. Draper, Jr., a white collar World War Two general who later administered postwar assistance to Germany and served as undersecretary of war and of the army. However, Draper was not just a senior civil servant, he was also a rich investment banker whose partners came from the highest echelons of the U.S. establishment. So too did the members of the Draper Committee, as it came to be called (Ross 1998).

Although the Draper Committee was initially charged with studying U.S. foreign

military aid, it expanded its purview to consider non-military assistance and the economic and political situation in recipient nations, including the role of population growth. Population entered the deliberations through two routes. The first was a committee report, "The Population Explosion," by R.R. Adams. Adams was influenced by Princeton-trained demographer Ansley Coale and his colleague Edgar Hoover's book, Population Growth and Development in Low-Income Countries, funded by the World Bank (Donaldson 1990). Coale and Hoover claimed that rapid population growth decreased the share of a country's economic resources devoted to savings and investment, and thus had a deleterious effect on economic growth (Furedi 1997). Adams' report warned that by curtailing development, rapid population growth could cause political instability and "international class war" (Donaldson 1990:23).

The second major influence was Hugh Moore, the colorful president of the Dixie Cup corporation who believed rapid population growth threatened American corporate control of Third World raw materials because of the likelihood that it would lead to communist takeovers and chaos. Moore published an alarmist pamphlet to this effect, The Population Bomb, which was widely distributed. Although many professional demographers and foundation officers found Moore's inflammatory prose distasteful, the pamphlet succeeded in reaching a policy audience, becoming assigned reading at the State Department's Foreign Service School, for example. As Sharpless writes, Moore "brought the rarefied discourse of the professional demographer into the public arena, cut away all ambiguity, and made population growth a strategic issue of serious importance" (Sharpless 1997:194).

On the day the Draper Committee was established, Moore sent Draper a cable

that warned: "If your committee does not look into the impact and implications of the population explosion, you will be derelict in your duty" (cited in Piotrow 1973:37). Draper took the advice to heart. In July 1959 at a White House press conference publicizing his committee's final recommendations, he made a dramatic presentation with an alarming map of world population growth in the background. The committee advised that the U.S. government fund population research as part of its Mutual Security Program, and that aid be given to those "developing countries who establish programs to check population growth" (cited in Mass 1976:41).

Although the Draper report had a major impact in policy circles, influencing the Ford Foundation, for example (Caldwell and Caldwell:1986), President Eisenhower himself was not easily persuaded. "Birth control is not our business," he declared in December of that year. "I cannot imagine anything more emphatically a subject that is not a proper political or governmental activity or function or responsibility" (cited in Green 1993:303).

Eisenhower's views reflected the fact that culturally, birth control was still a taboo subject in the U.S., although the situation was soon to change. In the late 1950s reproductive scientist Gregory Pincus developed the birth control pill with initial funding raised by Margaret Sanger, who wanted a "simple, cheap contraceptive to be used in poverty-stricken slums and jungles, and among the most ignorant people" (cited in Seaman and Seaman 1977:62). Beginning in 1960, the pill was marketed by the pharmaceutical firm G.D. Searle, and two years later the Lippes Loop IUD was introduced. The availability of these technologies gave a boost to the population field; here was a quick technical fix for high fertility (Hartmann 1995). Their availability also

helped relax conservative social mores around contraception; the era of 'sexual liberation' was on the horizon in the U.S.

The Kennedy administration proved more receptive to the idea of U.S. population assistance. In 1961 it appointed Roger Barnett as State Department population advisor. Barnett recommended funnelling population assistance through the U.N. and fostered closer relations between the State Department and private population interests, including the Ford Foundation, the Population Council and General Draper who was now a lobbyist for the cause. Barnett's appointment marked the beginning of a close relationship between the State Department and the population lobby, a relationship which would prove important to Thomas Homer-Dixon's political success (see Chapter Five).

USAID was also established in 1961. Despite the efforts of Senator J. William Fulbright to secure Congressional approval for USAID population research and funding, the agency did not have an explicit population control program until the Johnson administration (Donaldson 1990).

In 1965 President Johnson proclaimed in his State of the Union Address that he would "seek new ways to use our knowledge to help deal with the explosion in world population and the growing scarcity in world resources" (cited in Green 1993:305). (Johnson would increasingly use food scarcity arguments to justify population assistance.) Soon after, USAID alerted its mission directors abroad that it would entertain funding requests from host governments for family planning programs. From this time on population control gathered a rapid momentum in the U.S. government; by 1967 USAID was giving $35 million annually in population assistance. It is still the

largest single funder in the field.

In addition to allocating these funds, Congress held hearings on the population issue. From 1965-1968, Senator Ernest Gruening's subcommittee on Foreign Aid Expenditures convened hearings, "during which a steady parade of politicians, population experts, priests, public health physicians, and professors made the problems of rapid population growth more visible to Congress and more acceptable for public discussion" (Donaldson 1990:38). Since that time, Congress has played a vital role in sustaining population assistance even in the face of tough anti-abortion opposition, partly because of pressure from private population lobby groups (Hartmann 1995).

During the same years the State Department held a series of high level briefings in which prominent demographers and family planners advised top government officials. These briefings were organized by the department's population advisor, Philander Claxton, who played a similar role in the Nixon administration (Green 1993). Population control enjoyed considerable bipartisan support, allowing for a continuity of actors and strategies through the Johnson, Nixon, Ford and Carter administrations. Its bureaucratic entrenchment during this period -- in USAID, the State Department, and Congress -- is no doubt one reason it was able to survive the later challenges of the Reagan and Bush administrations.

Population issues also became a matter of concern for national security agencies. In 1974 Nixon instructed the National Security Council (NSC), the highest body within the executive branch authorized to plan and implement foreign policy, to undertake a study of the impact of world population growth on U.S. security interests over the next 25 years. Written mainly by Philander Claxton and completed in 1974, the NSC's

population study, known as National Security Study Memorandum 200 (NSSM 200), was never formally approved by the Nixon administration, though its key findings were incorporated in another National Security Decision Memorandum, NSDM 314 (Green 1993, Information Project for Africa (IPFA) 1991a).

NSSM 200 was less focused on the internal effects of population growth in developing countries than with its external impact on U.S. strategic interests. The document stressed how population pressure could undermine U.S. access to needed raw materials and lead to a preponderance of youth, who were more likely to become radical and attack targets such as multinational corporations. "Conflicts that are regarded in primarily political terms often have demographic roots," it stated (cited in IPFA 1991a:10). Concerned to mask U.S. strategic motives, the report recommended that:

> The U.S. can help to minimize charges of an imperialist motivation behind its support of population activities by repeatedly asserting that such support derives from a concern with: (a) the right of the individual to determine freely and responsibly their number and spacing of children...and (b) the fundamental social and economic development of poor countries...(cited in IPFA 1991a:17).

In addition to family planning, it suggested that "minimal levels of education, especially for women" and "education and indoctrination of the rising generation of children regarding the desirability of smaller family size," could have a long term positive effect on fertility rates (cited in IPFAa:22). The report also identified 13 key countries where the U.S. had a special interest in population/security issues: India, Bangladesh, Pakistan, Nigeria, Mexico, Indonesia, Brazil, the Philippines, Thailand, Egypt, Turkey, Ethiopia and Colombia.

In 1975 President Ford approved the subsequent NSDM 314 report and charged the NSC Ad Hoc Group on Population Policy, under the leadership of the new State

Department population advisor, Ambassador Marshall Green, with its implementation. All U.S. ambassadors were notified about NSDM 314, "and their views were solicited on how effectively host governments were dealing with population issues" (Green 1993:311). In 1977 a Select Committee on Population was formed in the House of Representatives. Green writes that this committee and its hearings broadened awareness of population issues in Congress and elsewhere, "and were taken into account by the NSC Ad Hoc Group on Population Policy" (311). The NSC group remained active until it was disbanded by the Reagan administration.

Although defense and intelligence agencies may have helped to decide which countries to target for population control (most of the 13 countries listed in NSSM 200 were major recipients of population assistance), it is unclear how much they were actually involved in the design and implementation of USAID-supported family planning programs. Collaboration between USAID and national security agencies is not unknown. During the Vietnam War especially, many USAID programs were directly linked with the war effort. At the same time the agency was greatly increasing its support for population control (Donaldson 1990). Some observers argue that USAID-funded population communications programs initiated in the 1980s are in fact a form of psychological warfare (IPFAb 1991).

The sensitivity of the birth control issue, however, probably mitigated against the direct involvement of security agencies in population programs. Indeed, the main strategy was to channel aid to private and multilateral organizations in order to avoid charges of U.S. cultural imperialism. As Ambassador Marshall Green candidly put it:

> In all of our assistance, we would do well to maintain a low
> profile. It is probable that we will have to work more and more through

international organizations and private voluntary groups since these non-U.S. government entities are rather widely preferred in countries now entering the family planning field (Green 1976).

By the early 1970s USAID was contributing over half the budget of UNFPA and the International Planned Parenthood Federation (IPPF). Neo-Malthusianism was not only successfully dispersed throughout the U.S. government, but within international institutions as well, achieving the status of a global discourse (Barrett 1995, Richey 1999).

The Convenience of Mixed Motives

While its strategic applications and inclusion in a diverse range of public and private institutions help explain the staying power of neo-Malthusianism, it has also benefited from the convenience of mixed motives, in particular concerns for both individual and collective welfare. Many 19th century neo-Malthusians argued for birth control as a way to improve the living standards of the poor, and later as a means to emancipate women. While changing shape over time, this social reform aspect of neo-Malthusianism never disappeared, and in fact, would prove to mesh well with post-World War Two development prerogatives in which raising per capita living standards was the sine qua non of national strength (Barrett 1995). Family planning could kill two birds with one stone: it could increase individual incomes and at the same time hasten economic development.

In practice, however, the tension between individual and collective welfare goals proved difficult to resolve and created fissures within the population field between those who supported voluntary family planning and those who endorsed more coercive means. What if the model rational peasant proved irrationally disposed to a large family size?

What if despite all the surveys that showed a high demand for contraception, many poor women would not use it? For the hardliners in the field, it became a question then of goading or forcing people to use birth control for their own and their nation's good (Hartmann 1995).

Yet even as population programs escalated their use of high pressure methods, rationales based on individual welfare flourished. In the early 1960s individuals were portrayed as the beneficiaries of population control programs because of anticipated improvements in living standards, but by the end of the decade the emphasis changed. As the result of the new global discourse on individual rights,

> access to family planning was framed as a new basic human right. The depiction of individuals and women in the population/development discourse moved from rational agents to be convinced of choices, to citizens with rights to make decisions about family size (Barrett 1995:239).

To navigate the tricky territory between rights and obligations, the Plan of Action endorsed at the 1974 World Population Conference in Bucharest proclaimed that "All couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children." That responsibility takes into account "the needs of their living and future children, and their responsibility towards the community" (U.N. Department of Economic and Social Affairs 1975). This language is open to various interpretations. The freedom to act "freely" ceases to be meaningful, for example, when acting responsibly means conforming to the demographic goals of government population programs which ostensibly represent the interests of the "community" (Tomasevski 1994).

At the 1974 U.N. international population conference in Bucharest, the

population field was also forced to navigate the troubled waters of North-South relations. In their call for a New International Economic Order, many Southern countries challenged the neo-Malthusian reasoning that population growth was the main cause of underdevelopment, pointing instead to Northern economic and political domination of the South. Moreover, they resuscitated the unrevised version of demographic transition theory, arguing that "development is the best contraceptive." However, development in this instance was not just defined as industrialization, but redistribution of resources between North and South. The failure of past development efforts necessitated a new approach at the national level too: meeting the "basic human needs" of the poor for food, shelter, health care, etc.

Because of the social reform tradition, more liberal neo-Malthusians were able to rise to the occasion at Bucharest. This included John D. Rockefeller III himself, who had undergone something of an ideological conversion and was now supporting women's rights. A new consensus emerged: meeting people's basic needs would simultaneously help bring about development and lower birth rates, and family planning would be an important component of the basic needs integrated "package" of services. The question that was carefully avoided by elites from both North and South, of course, was why the basic needs of the poor were not being met in the first place; deeper structural inequalities such as disparities in land ownership were conveniently left out of the discussion (Hartmann 1995).[3] The equity language of Bucharest succeeded, at least temporarily, in reducing the tension between individual and collective welfare goals -- here was a win-win recipe par excellence where mixed motives only enhanced the flavor, and population control appeared to be a progressive enterprise.

By the end of the 1970s the population establishment had achieved considerable success, marked by its substantial academic base, attraction of both private and public funds, representation in a diverse range of institutions, and ability to adopt and disseminate multiple and shifting rationales for population control. However, in the next decade it faced new challenges, beginning with the election of Ronald Reagan in 1980. In the face of conservative opposition, fresh alliances and rationales were required to sustain the neo-Malthusian enterprise. The most important, and lasting, of these was the link between population and the environment.

IV. ENTER THE ENVIRONMENT

Although the close strategic alliance between U.S. population and environmental organizations dates from the 1980s (Crane 1993), neo-Malthusian influences on the American environmental movement have a longer and deeper history. This part addresses that history first, then explores the nature of the contemporary political alliances forged between population and environment organizations.

People as the Enemy

According to Wilmoth and Ball (1992), framing the population issue in environmental terms was probably the single most important factor in building a public consensus for population control in the U.S. However, this framing would not have been so successful if it were not for the peculiar character of American environmentalism, in which conservationism, the wilderness ethic, and discourses of survivalism have all lent themselves to neo-Malthusian assumptions about the relationship between people and nature.

Social Darwinism and neo-Malthusianism have a long tradition in Western conservationist thought (see Arnold 1996). In the U.S., conservationists, and in particular conservation biologists, have been some of the most outspoken and extremist advocates of population control.[4] In the late 1940s two prominent conservationists published books which warned of the pressures population growth was putting on natural resources, both in the U.S. and overseas: Our Plundered Planet by Fairfield Osborn and Road to Survival by William Vogt. Vogt's book was an instant bestseller, despite, or perhaps because of, its dire predictions of imminent famine, even in Europe, and its eugenic prescriptions, which included sterilization bonuses for the feckless indigent (Chase 1977). It greatly influenced a young conservation biology student at the University of Pennsylvania, Paul Ehrlich (Chase 1977, McCormick 1989).

In 1967, the Sierra Club commissioned Ehrlich, who was now a professor at Stanford University, to write a book on population. The result was The Population Bomb, which became one of the best-selling environmental books ever (McCormick 1989). "The battle to feed all humanity is over," Ehrlich, a master of apocalyptic language, claimed. "In the 1970s the world will undergo famines -- hundreds of millions of people will starve to death" (Ehrlich 1968:Prologue). From that time on, Ehrlich had a major impact on public perceptions of population issues; he was the most frequent author on the subject in major American popular magazines, with Lester Brown, the neo-Malthusian founder of Worldwatch Institute, another contender (Wilmoth and Ball 1992).

The same year that The Population Bomb hit the market, the ecologist Garrett Hardin (1968) published his famous essay "Tragedy of the Commons" in Science. While

some critics took issue with his harsh view of human nature and ahistorical analysis of the destruction of the commons, his eugenic sympathies largely went unnoticed. In a sense, both Hardin and Ehrlich were following a tradition established earlier in the century when the field of biology was the main locus of population research. Although Ehrlich was not a eugenicist like Hardin, he shared with him a world view unmuddied by the complexities of social science and in which the reproductive behavior of the poor masses was likened to that of pond weed or caterpillars. Early on, like Hardin, he also advocated policies of triage, such as no longer shipping food aid to countries where the food-population balance was hopeless (Chase 1977).

This particular conservationist view of people as the enemy of nature was reinforced by the wilderness ethic. Cronon describes the unique place the idea of wilderness holds in the American psyche, both as a romantic, sublime, quasi-religious force and as a vehicle for frontier nostalgia. "For many Americans," he writes, "wilderness stands as the last remaining place where civilization, that all too human disease, has not fully infected the earth" (Cronon 1995:70). It is one of the main foundational stones of American environmentalism.

The ways in which wilderness is constructed have a number of problematic outcomes. The ahistorical myth of wilderness as "virgin" land obscures the systematic forced migration and genocide of its original Native American inhabitants. It leads to a dualistic and simplistic vision of humans versus nature, the parochial philosophy of an urban middle and upper class far removed from the daily rigors of living off, and with, the land. At the same time, by locating nature in the far-off wild, it allows people to evade the responsibility for environmental protection closer to home (Cronon 1995).

The wilderness ethic, Cronon argues, is also a peculiarly bourgeois and masculine form of anti-modernism. At the beginning of the twentieth century, the model of the rugged frontier individualist informed the conservation efforts of men like Theodore Roosevelt who came from the highest echelons of American society.[5] As Cronon writes:

> The very men who most benefited from urban-industrial capitalism were among those who believed they must escape its debilitating effects. If the frontier was passing, then men who had the means to do so should preserve for themselves some remnant of its wild landscape so that they might enjoy the regeneration and renewal that came from sleeping under the stars, participating in blood sports, and living off the land (78).

Men like Roosevelt not only sought the purity of the wilderness, but the purity of the race, fearing the 'race suicide' resulting from fertility decline among white, educated women and the influx of immigrants from non-Nordic nations.

Accounts of the early history of modern American environmentalism typically extol the virtues of a few well-known men who fought for wilderness protection at the turn of the century. The story is often presented in terms of the difference between John Muir, the aesthetic naturalist and preservationist, and Gifford Pinchot, the pragmatic professional conservationist who had a more utilitarian approach to wilderness use. By making wilderness the main referent, these histories ignore other contemporary urban-based, socially-oriented forms of environmentalism, such as the municipal house-keeping movement, led by women and focused on sanitation, public health and nutrition (Athanasiou 1996). This privileging of the wilderness narrowed the scope of what is considered environmental activism, and reinforced white, wealthy male dominance of the movement, a trend which continues (see Seager 1993).

The wilderness ethic is also geographically parochial, blinding many Americans to the complex ways in which people relate to the land in other countries and cultures (Guha 1989). It is hostile to sedentary agriculture and by extension to Third World peasants, glorifying only hunter gatherers (Cronon 1995). No wonder then that it fits well with many neo-Malthusian conceptions. At its most extreme, it leads to a kind of "deep ecology" which is deeply antagonistic to poor people. Several prominent deep ecologists have called for substantial and rapid reductions in human population, by as much as 90 percent. Some favor stringent population control measures, while others believe in letting AIDS run its course in Africa and blocking famine and disaster relief (Seager 1993).

Another powerful influence on American environmentalism is what Dryzek calls the discourse of survivalism. Its basic story line is that "human demands on the carrying capacity of ecosystems threaten to explode out of control, and draconian action needs to be taken in order to curb these demands" (Dryzek 1997:34). Beginning in the late 1960s, this discourse helped to set the apocalyptic tone of American environmentalism.

The most well-known articulation of this philosophy is the MIT study commissioned by the Club of Rome, published as the best-selling book The Limits to Growth in 1972 (Meadows et al 1972). Using computer simulations, this book argued that if existing trends in population growth, pollution, industrialization, food production and resource use persisted, limits to growth would be reached within a hundred years, leading to catastrophe. Despite a number of contemporary critiques of the study's methods and findings, including its failure to adequately take into account the possibility of technical progress (McCormick 1989), the ideological momentum of survivalism

could not be stopped.

Because survivalism is concerned with aggregates, particularly aggregate amounts of resources and human population, it does not lend itself well to a disaggregated, time and site-specific analysis of the dynamics of resource use. Moreover, it tends to favor authoritarian and hierarchical forms of social control. "'Populations,' be they national, global, or class-specific, have no agency; they are only acted upon, as aggregates to be monitored through statistics and controlled by government policy" (Dryzek 1997:35). It is elites who have agency, especially experts in population biology, ecology and systems analysis, and the government officials who implement their recommendations.

Dryzek argues that although survivalism generally does not fare well in the real world of government practices, it has impacted population policy, providing a rationale for draconian measures such as those employed in China. It has also greatly influenced popular consciousness of the population issue by reinforcing and making 'scientifically' credible the Malthusian gloom and doom scenario. Combine Ehrlich's The Population Bomb with The Limits to Growth and you have a "potent scarcity cocktail," a term coined by Andrew Ross (Ross 1996:25).

Why were so many Americans ready and willing to swallow this particular cocktail? There is a certain ironic logic in the fact that the country with the most profligate consumption and waste levels has been the most obsessed with planetary resource limits (and the least willing to do anything about them). Psychologically, concerns about scarcity perhaps reflect a certain Puritan guilt at profligacy.

Sandilands argues that the idea of environmental limits is all tied up with limits

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to pleasure and sex; sex is conspicuous by its absence in most population discourses (Sandilands 1999). When it is mentioned, the inference often is that women's sexuality is out of control. In The Population Bomb, for example, Ehrlich argued that women use their year-long sexuality in order to entice men into staying in family groups, and the resulting uncontrolled biological "urges" lead to overbreeding (cited in Jaquette and Staudt 1985).

Ross (1996) makes the point that concerns about natural scarcities parallel the manufacturing of social scarcities essential to competitive capitalist regimes. The grossly unequal division of wealth in a society of resource abundance and waste demands an ethic of social scarcity to explain poverty. In the public consciousness, supposed limits to growth in social welfare expenditures become intertwined with the notion of environmental limits.

Related to survivalism, public concern also mounted over limits to urban growth in the U.S., framed in terms of "overcrowding" and its supposed ill effects: congestion, housing shortages, pollution, lack of recreational space, and social pathologies such as crime and sexual deviance. Overcrowding segued easily into anxieties about population growth and immigration. It helped to shift the geographic focus from the Third World and bring the population issue back home to the U.S. in the 1960s (Wilmoth and Ball 1992).[6]

Survivalism's popularity in the late 1960s and 1970s is linked to other contemporary social and political currents, such as the counter-culture's critique of materialism and economic growth, and very real fears of nuclear apocalypse. In a sense the discourse of limits was absorbed into the larger groundswell of citizen activism; on

college campuses few saw a contradiction in placing promotional materials from Zero Population Growth side by side with anti-war literature.

Chase argues that neo-Malthusianism actually deradicalized the student movement in the U.S and diverted attention away from the real causes of environmental degradation. "People Pollute" became the new catchy slogan, rather than "Corporations Pollute." Meanwhile, the generous contributions of men like Hugh Moore facilitated the shift. Concerned that the organizers of the first Earth Day in 1970 were neglecting population, Moore funded a major propaganda blitz on college campuses, featuring the work of Ehrlich (Chase 1977).

The wilderness ethic and survivalism both help to explain neo-Malthusianism's ideological success. However, it is questionable whether its impact on American environmentalism would have been so strong and enduring if it were not for political developments in the 1980s when environmental pessimism met its match in New Right cornucopianism.

The Politics of Either/Or

Like Limits to Growth, the Carter administration-commissioned Global 2000 Report to the President, released in 1980, warned of serious social and ecological consequences if current population and resource use trends continued. The report never enjoyed much of an impact, however, since that same year Ronald Reagan became president. Reagan not only was hostile to the philosophy of limits, but to the very idea of government regulation of the environment.

Instead, New Right economists such as Julian Simon and Herman Kahn had his ear. In the Resourceful Earth they challenged the Global 2000 Report, arguing that

economic growth, human ingenuity and technical progress were likely to make the world a better place, not worse (Simon and Kahn 1984). Simon had already proclaimed elsewhere that population growth produces the "ultimate resource," skilled, spirited and hopeful people, who, provided they live in an unfettered market economy, can come up with the new ideas to make the system work (Simon 1981).

Simon and Kahn's ideas heavily influenced the official U.S. Policy Statement for the 1984 U.N. International Conference on Population in Mexico City. In a major reversal of U.S. policy, the document depicted population growth as a "neutral phenomenon," which has become a problem only because of too much "governmental control of economies" and an "outbreak of anti-intellectualism, which attacked science, technology and the very concept of material progress" in the West (cited in Hartmann 1995:35-36). At the Mexico City conference, the Reagan administration also bowed to the growing strength of the anti-abortion movement. It launched a major attack on abortion rights, denying U.S. funds to any private organization which performed or even just counselled women about abortion.

Population and environment groups had already been working together before the Mexico City conference. In 1974 the Sierra Club hired its first population program director, and the National Audubon Society launched its own program in 1979. In 1981 Audubon sponsored a national conference on population, which became the springboard for the Global Tomorrow Coalition, a network of over 100 population and environment groups (Hartmann 1995). However, the threat the Reagan administration posed to both international population assistance and environmental regulation drove the two camps even closer together as they sought to expand their constituencies and bolster their

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presence on Capitol Hill (Crane 1993).

Coming under increasing corporate influence, the mainstream environmental movement was even more receptive to this alliance than it might have been otherwise. Population was a convenient cause, a way to divert attention from the lack of strong activism against industrial polluters. In their 1986 report, An Environmental Agenda for the Future, the 'Group of Ten' top U.S. environmental leaders proclaimed human overpopulation as the root cause of environmental problems (Dowie 1995).

The alliance between population and environment groups has not always been an easy one. It has tended to benefit population groups more than environmental ones, since the former have not taken on the broader environmental agenda. Moreover, environmental groups risk being attacked by anti-abortion supporters because of their support for population assistance (Crane 1993). Yet the population-environment coalition has gained in strength and is still very active today. While ideologically American environmentalism was already predisposed toward neo-Malthusian assumptions, the population-environment coalition spread the message far and wide, so that it is probably not an exaggeration to say that most Americans who are concerned about global environmental degradation still believe population growth is the main culprit.

Once again, private foundation funding was, and remains, instrumental to the existence and effectiveness of the population-environment coalition. Population money has enabled many of the larger environmental groups to set up and maintain population offices within their organizations. In 1990, for example, population advocacy became the most highly funded program in the Sierra Club. Some of this funding has come from

foundations explicitly interested in restrictive immigration policies (Dowie 1995). As we shall see later, population funding has also played a vital role in supporting the environment and security field.

In addition to their domestic efforts, U.S. population and environment groups have worked to influence international environmental organizations such as the International Union for the Conservation of Nature (IUCN). During preparations for the 1992 Earth Summit in Rio de Janeiro, their aggressive efforts backfired, however. Not only did many Southern countries oppose the idea that population growth posed the biggest threat to the global environment, but the transnational women's health movement mounted a strong challenge to population control policies. At Rio feminist activists vocally criticized demographically-driven family planning programs, calling instead for access to safe, voluntary contraception and abortion as basic rights. They also identified structural adjustment, militarism, and wasteful and unjust production and consumption patterns as the key culprits in environmental degradation -- not population growth. Their critique was incorporated into a number of documents, including the nongovernmental Women's Action Agenda 21 and the NGO Treaty on Population and the Environment (Hartmann 1995).

The population-environment coalition tried hard to portray the feminist critique as playing into the hands of the Vatican, a problematic strategy since the feminists were outspokenly in favor of reproductive rights. The politics of either/or were proving harder to sustain in the face of a progressive, feminist anti-neo-Malthusian analysis which was at once pro-choice *and* environmentalist. Bringing the feminists on board would be the next test of neo-Malthusianism's malleability and mappability.

V. THE WOMAN QUESTION

As reproducers, women have long been central to population policies, but more
as objects than subjects. "Nowhere is the link between individually-disciplined bodies
and national 'development' more explicit than in the discourse of population as it is
presented to Third World women," writes Lisa Richey in her study of family planning in
Tanzania (Richey 1999:4). In the global population discourse, overpopulation is the
problem, family planning the solution, and 'local' women the recipients of these services.
Yet, there is a certain paradox "in defining family planners as 'modern' women, yet not
actually constituting them as knowing, active subjects," capable of making their own
fertility choices (24).

This paradox has long haunted the population field which has held very
traditional views of women (Kabeer 1995). In her review of articles involving women in
the journal Demography from 1964-1993, Susan Watkins found that:

> If all we knew about women was what we read in the articles on
> fertility, marriage and the family, we would conclude that women are
> primarily producers of children and of child services; that they produce
> with little assistance from men; that they are socially isolated from
> relatives and friends... We would learn even less about men (Watkins
> 1993:553).

At the height of population crisis rhetoric in the late 1960s, these traditional mothers
became "targets" in the "Holy War" against population growth (Watkins 1993), not only
in the pages of Demography, but in the aggressive contraceptive promotion campaigns
launched by USAID (Jaquette and Staudt 1985, Hartmann 1995).

By widening the scope of the population-development debate, the 1974

Bucharest conference helped inspire a somewhat broader view of Third World women. Concurrently, social science research was pointing to the fertility-reducing effects of improving women's status through education, employment, etc., inspiring a new round of income generation projects in the development field (Kabeer 1995). Although this approach at least acknowledged women as workers, the kind of employment generated was generally low-pay and home-based; the main goal was to reduce fertility rather than truly empower women. In addition, Jaquette and Staudt note how the increasing involvement of social scientists in population policies "reinforced rather than challenged the hierarchical bureaucratic relationships that were institutionalized under the medical approach" in the early years of the USAID population program (Jaquette and Staudt 1985:225).

The limited success of this instrumentalist approach, coupled with the persistence of target-driven family planning programs, helped kindle feminist opposition to population control policies in the 1980s. Within the population field, feminist reformers fought the target approach, introducing the concepts of the "user's perspective" and quality of care into the family planning lexicon. Outside, women's health activists protested the dumping of dangerous contraceptives such as the Dalkon Shield IUD overseas and the lack of attention to health and safety issues in both contraceptive research and distribution (Hartmann 1995). The more radical among them also linked neo-Malthusianism with U.S. imperialism (e.g. Mass 1976).

At first the population establishment took little note of the opposition building within the women's movement, partly because the movement was diverse enough that it was possible to listen selectively to feminist voices (Hodgson and Watkins 1997).[7] Yet

by 1994, a substantial segment of the women's movement had joined with the population establishment to forge the 'Cairo consensus' proclaimed at the ICPD in Egypt that year. This consensus maintains that rapid population growth is still a major cause of poverty and environmental degradation, but that women's empowerment and reproductive health programs are the solution to high birth rates, instead of the top-down, target-driven and often coercive population programs of the past.

There are many reasons for the creation of the Cairo coalition between feminists and the population establishment: the latter's poor showing at the Rio Earth Summit, noted above; the growing strength of the transnational women's movement; the mounting threat posed to international family planning and women's rights by anti-abortion and fundamentalist forces; and a new generation of personnel, many of them young women influenced by feminism, entering the population field. It is also true that the Cairo consensus was carefully orchestrated, mainly with U.S. funds, in another example of strategic philanthropy.

Private philanthropic funding brought national and international women's groups into the consensus process, though a few powerful U.S. organizations, such as the New York-based International Women's Health Coalition, dominated the scene. Feminist groups with a more radical critique of neo-liberalism tended to be marginalized, inhabiting the "negative space" outside the consensus, and reproductive health issues were privileged over social and economic ones (Silliman 1999; Hartmann 1995, 2002).

The Pew Charitable Trusts, the largest environmental grantmaker in the U.S., meanwhile channelled over $13 million to environmental groups to produce massive amounts of neo-Malthusian propaganda in advance of the ICPD; religious leaders,

foreign policy specialists and academic researchers such as Thomas Homer-Dixon were also recipients of Pew's largesse. The other main players were the U.S. State Department through the office of Timothy Wirth, Undersecretary for Global Affairs, the UNFPA, and Ted Turner of the powerful Turner Broadcasting System (Hartmann 1995). "It was American leadership above all which drove the Cairo process along," stated Nafis Sadik, UNFPA director and ICPD Secretary General (cited in Hodgson and Watkins 1997:504).

The Cairo consensus was a remarkable political feat, uniting feminists with neo-Malthusian environmentalists and family planners. It is still too early to tell who got the most out of the bargain. The Cairo Program of Action has no doubt opened up important space for feminist reform of the population field (see Haberland and Measham 2002), but it is foundering on a number of internal contradictions. Because it is firmly situated within the neoliberal model of development, with its emphasis on the free market, privatization and the dismantling of the state's welfare functions, the Cairo health and empowerment agenda has the flavor of pie in the sky. It is difficult to build reproductive health services on the foundation of deteriorating or non-existent public health systems (Richey 2002); in the context of growing economic inequality and instability it is similarly hard to 'empower' women (Petchesky 2000). In fact, the Cairo empowerment strategy is largely instrumental like the income generation project before it. Its main approach is education for girls to delay the age of marriage, and micro-credit as the solution for poverty.

Bureaucratic inertia, inadequate funding, and the persistence of demographic targeting also militate against effective implementation of the Cairo program. Even after

Cairo, USAID's main rationale for population assistance remained the reduction of population growth (Center for Reproductive Law and Policy 1998), and a number of countries (India, Mexico, Indonesia, China) continue to use high pressure tactics to get women to accept sterilization or long-acting contraception (Hartmann 2002). Most observers, inside and outside the population field, acknowledge that to date the implementation of Cairo has been disappointing (see, for example, Women's Environment and Development Organization (WEDO) 1999, Forman and Ghosh 2000; for a more optimistic view, see Haberland and Measham 2002).

Discursively, the Cairo consensus exchanges the coercive population control methods of the past for a notion of self-disciplined female reproductive behavior through the correct 'choice' of modern contraception, which will help women help themselves, their children and the nation (Richey 1999). This new woman is a boon to the market economy: she can consume more commodities because she has fewer children and she saves corporations money by requiring less maternity benefits. Her self-regulation aids her in managing her family's adjustment to the instability and unpredictability of latter-day capitalism. The Cairo consensus is part of what Sandilands calls "reproductive structural adjustment":

> In structural adjustment, countries are to produce *themselves* according to a capitalist productive logic; in reproductive structural adjustment, women and men are to produce *themselves* according to profoundly normative discourses about appropriate gender relations and family structures (Sandilands 1999:88).

The Cairo emphasis on the rational choice of the individual woman fits well with neoliberal prerogatives, although the contradiction is that the state is still needed in most places to provide and enforce population programs.[8] Population programs may, in fact,

be one of the last bastions of state intervention in social 'welfare'. Furedi notes the irony of the current mushrooming of population policies in direct proportion to the declining commitment to social and economic transformation (Furedi 1997). Unwilling or unable to invest in the costs of social reproduction, the state concentrates on limiting women's reproduction.

These contradictions and ironies have not been lost on many feminists, who are doing a good deal of soul-searching about their involvement in the Cairo consensus and the deleterious effects of neoliberalism on women's health and lives (Petchesky 2000). However, although it is difficult to work with the population establishment, it is also difficult to work without them. What critics like Furedi fail to acknowledge is that many women want access to birth control, and sometimes the only way to get that access is through population programs. In many countries the rise of fundamentalist forces is putting that access ever more at risk. Pragmatically, it is better to try to reform population programs, the logic goes, than to do away with them altogether.

It is unclear how long the alliance between feminists and neo-Malthusians will hold. The election of President George W. Bush, Jr. in 2000 has led to a renewed assault on international family planning by anti-abortion forces, which could keep the alliance together out of necessity. At the same time neo-Malthusians might reckon that if they were "unencumbered by alliances with feminists, their ability to negotiate with social conservatives would be enhanced" (Hodgson and Watkins 1997:509). Whether or not the alliance holds, the language of women's empowerment and reproductive health embodied in the Cairo consensus is now a vital part of neo-Malthusian discourse. It provides increased legitimacy to the discourse in liberal circles, since now it is possible

to be for women's rights and population control at the same time. Indeed, one ostensibly reinforces the other.

While the Cairo consensus has resolved, at least partially and temporarily, the woman question, neo-Malthusianism in the present moment faces other serious challenges, not the least of which is declining population growth worldwide. Part Six considers the current directions neo-Malthusianism is taking in response to a changing demographic and political environment.

VI. NEO-MALTHUSIANISM IN AN ERA OF DECLINING
POPULATION GROWTH

It is now common knowledge in demographic circles, though not necessarily in popular ones, that the 'population explosion' of the last century is over. Population growth rates are declining worldwide more rapidly than anticipated even a few years ago. Since 1965, the world's annual population growth rate has fallen from 2.04 percent to 1.2 percent. According to the U.N.'s high, medium and low projections, world population will reach either 10.9, 9.3, or 7.9 billion people in 2050 and then will start to level off. The medium variant of approximately 9 billion is most commonly accepted (U.N. Population Division 2000a).

Along with this decline in population growth there is a growing convergence between the average family size in developed and developing nations. As Wilson (2001) notes, "we are moving into a world where the distinction between developed and developing nations is of greatly diminished relevance to fertility" (166). He estimates that today the median individual lives in a country where on average women bear

slightly more than two children in their lifetime; by 2050 a majority of the world's people may live in countries where fertility is below the long-term replacement level. Indeed, there is growing concern about the possibility of a "population implosion" (Eberstadt 2001).

Perhaps the ultimate test of neo-Malthusianism's malleability and mappability will be its ability to respond to the phenomenon of declining population growth. One can already identify several broad trends:

First is demographic exceptionalism in the form of concerns about countries which still have high fertility rates, particularly the nations of sub-Saharan Africa and the northern states of India (Wilson 2001). Richey (2001) argues that sub-Saharan Africa, in fact, has become the primary focus of international population policy, with its emphasis on contraceptive delivery as the main vehicle with which to drive birth rates down. The result is a new "global consensus on the lessened peril of over-population, while maintaining the demographic imperative for interventions in Africa" (5).

There is a certain tragic irony that reducing fertility in Africa remains a central focus of health policy, when the region is the hardest hit by the AIDS epidemic.[9] The neo-Malthusian resolution to this contradiction is the observation that even with the devastating impact of AIDS, populations of the most affected countries, with the exception of South Africa, are still expected to be larger by 2050 than they are today (U.N. Population Division 2000a).

Second are continuing concerns with population distribution. Eighty percent of the world's population now lives in developing countries, and this figure is likely to rise to 90 percent in 2050. This is largely due to the phenomenon of demographic

momentum. Even though fertility levels are falling in developing countries, there is a continuing increase in the number of women of childbearing age as a legacy of past high fertility levels (U.N. Population Division 1999). The shrinking proportion of the Western population gives rise to what Amartya Sen calls "fears of being engulfed," especially by Third World migrants (Sen 1994:63). The more conservative strain of neo-Malthusianism blames population pressures for driving immigration.

A third and related trend is the concern about population ageing. The combination of below-replacement level fertility and higher life expectancies in a number of developed countries has led to a growing proportion of elderly in the population; the U.N. estimates that the median age in developed countries will rise from 38 in 2000 to 46 in 2050. Population ageing is associated with a host of social and economic problems, including maintenance of social security systems, rising health costs and declines in productivity (U.N. Population Division 2000b). According to the U.N., the two possible solutions to population aging are increasing immigration and increasing fertility, both of which run counter to the neo-Malthusian creed.

A growing tension exists between Western "fears of engulfment" and the need for immigration to countermand population ageing and to expand the labor force. As the U.N. notes:

> The volumes of immigrants that would be necessary to prevent population decline are relatively small in demographic terms. However, even in the short term, these levels of immigration are often considered politically and socially unacceptable. This is a major drawback, since, empirically, immigration seems to be socially less acceptable where local fertility is lower, which is also where it is needed the most. In the long term, the accumulated number of immigrants required to prevent population decline would result in a population with a large proportion of persons of foreign origin, which is widely considered politically and socially unacceptable (U.N. Population Division 2000b:2).

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As this passage illustrates, population concerns are increasingly taking on an ethnic dimension in the continuing dynamic interface between population quantity and quality issues.

In the face of these changing and confusing demographic realities, neo-Malthusianism has displayed a tendency to retreat into past certainties regarding the negative relationship of population growth to poverty[10] and particularly, the environment. In the case of the environment, there is a general acknowledgement of the complexity of population-environment relationships, but then a fall back into a simplistic dualism, wherein global environmental degradation is blamed on overconsumption in the North and population growth in the South.

Not surprisingly, policy prescriptions tend to focus on the latter in the form of fertility reduction. The UNFPA's State of the World Population 2001, for example, blames deforestation and global climate change primarily on population growth and promotes averting births as a solution for the negative environmental externalities to childbearing (UNFPA 2001). Another common neo-Malthusian assumption is that reducing fertility buys more time for coming up with ways to cope with environmental stress (see UNFPA 2001, Global Science Panel 2002). The fundamental emphasis on population control is meanwhile obscured by frequent references to the empowerment of women and reproductive health. It is a win-win world where "by moving towards gender equality and the empowerment of women, reproductive choice also promotes environmental conservation" (UNFPA 2001:10).

Such an analysis lets Northern governments and elites (and Southern ones too) off the hook for environmental degradation, while at the same time casting them in the

positive role of gender-sensitive conservationists and family planners. It is in fact this link with women that has given neo-Malthusianism environmentalism a new lease on life in liberal circles, a lease, one might add, helpfully financed by foundation funds. For example, the Packard Foundation, now the second largest private philanthropy in the U.S., has spent millions of dollars ($13 million alone in 2000) on a five year "PLANet" campaign to forge a coalition between prominent population, environment and family planning organizations. The campaign includes full page advertisements in major media outlets asserting that meeting women's family planning needs will save the rain forest (Hartmann 2002; see next chapter). Another reason for the persistence of neo-Malthusian is the continued power of the degradation narrative, which identifies population growth and poverty as the driving forces behind environmental degradation and migration in the South. This powerful narrative, the subject of the next chapter, has enjoyed enormous staying power since colonial times and is the primary link today between population, environment and security concerns.

In short, the malleability and mappability of neo-Malthusianism, along with its institutional strength, may allow it not only to survive, but continue to flourish even in an era of declining population growth. Time will tell how successfully it maps on to globalization and its associated woes -- growing disparities in wealth, environmental decline, immigration, and even war, terrorism and violent conflict. One thing is for certain: the map makers will not rest idle.

VII. CONCLUSION

This chapter has explored a number of the reasons why neo-Malthusianism has come to be such a powerful and persuasive discourse in the U.S. The dynamic interaction between population quality and quantity concerns, in particular the role of eugenics, helps explain how the neo-Malthusian movement grew in the first half of the twentieth century. After World War Two, the establishment of demography as a policy science and the receptivity of American social science to neo-Malthusian assumptions were important precursors to the rise of a private/public population establishment in the 1960s and 1970s. The enormous success of this establishment, in terms of its impact on national and international policy and public opinion, can be attributed to the role of strategic philanthropy in institution building, the effective way messages were framed and disseminated, the mappability of neo-Malthusianism onto the Cold War, its organizational diversification within the U.S. government, and the convenience of mixed motives and rationales.

American environmentalism, with its strong emphasis on the wilderness ethic and survivalism, proved particularly receptive to neo-Malthusian ideas. This receptivity helps explain how population and environment groups were able to form a coalition in the 1980s when both faced increasing political opposition from the Right. Neo-Malthusians also sought an alliance with feminists, culminating in the 1994 Cairo consensus. This consensus, though still fraught with contradictions, has given neo-Malthusianism increased legitimacy in liberal circles.

Today, faced with the reality of declining population growth, neo-Malthusianism

is characterized by concerns about demographic exceptionalism, population distribution

and ageing and their implications for immigration policies, and linkages between

population growth, poverty, environment and security. While none of the above factors

alone explain the remarkable power of neo-Malthusianism, taken together they shed

light on the key actors, interests and ideas which have sustained it over the course of the

last century and into the present one.

Endnotes to Chapter Two

[1]. For example, along with Hardin, well-known eugenicist J. Philippe Rushton is on the advisory board of the journal Population and the Environment, and it is edited by evolutionary psychologist Kevin MacDonald. MacDonald, who has testified on behalf of Holocaust denier, David Irving, believes liberal immigration policies in the U.S. are the result of a Jewish plot (Bhatia 2002). Another well-known figure in the anti-immigrant population and environment movement is Virginia Abernethy, who disapproves of racial mixing and is now associated with the racist organization, Council of Conservative Citizens (Southern Poverty Law Center 2002).

[2]. This belief did not die completely. Hans Morgenthau wrote in 1967 of the continuing importance of large population size to a country's ability to age war (Morgenthau 1967); military regimes in Latin America also used this rationale to support pronatalist policies.

[3]. Furedi (1997) argues that the Bucharest consensus essentially abandoned the linkage between population and economic growth, leading to a new redistributionist rationale for population policy based on the belief that rapid population growth was now an obstacle to the redistribution of income, not to the rise of per capita incomes per se. Micro-economic studies ostensibly showed that lower fertility contributed to greater equality, and that family planning could therefore advance equity goals. Despite the shift in argumentation, however, the concern with population growth remained.

[4]. For the role of conservation biology more generally in reinforcing prejudices against poor farmers and herders in the Third World, see Guha (1997).

[5]. For more on the intersection of the frontier and wilderness ethics, see Arnold (1996).

[6]. Today one of the main strategies of the anti-immigrant movement is to blame urban and suburban sprawl on immigrants, though there is little correlation (see Rivlin 2002).

[7]. According to Hodgson and Watkins (1997), Reagan's election in 1980 might have

fostered a closer alliance, but feminists were not all together unsympathetic to Reagan's critique of neo-Malthusianism while the population establishment was not willing to mount a forceful defense of abortion rights.

[8]. However, privatization of family planning services is now accelerating, and many women's groups are now receiving donor funds to provide direct reproductive health services. Observers worry that these groups are being drawn into the neoliberal agenda (Petchesky 2000, Silliman 1999).

[9]. See Richey (2001) for a description of how by skewing health priorities, the focus on reducing women's fertility can undermine efforts to address AIDS in Africa.

[10]. See, for example, the edited volume on Population Matters by Birdsall, Kelley and Sinding (2001) and the review essay by Ahlburg (2002). Richey (2001) points out how in the volume, Birdsall and Sinding attribute high fertility in poor families to a kind of market failure, analogous to pollution.

CHAPTER THREE

Tropical Tropes and Barren Slopes:

Degradation Narratives and Environmental Security

In the spring of 1998 I conducted my first round of interviews on environmental security in the Netherlands. My first appointment was with an official with the Directorate-General for Environmental Protection in the Hague. After coffee, we toured the state of the art, energy-efficient office building which housed the ministry. As time went on, I realized a comedy of errors had landed me an appointment with the wrong man. He was a specialist on noise abatement standards and was not familiar with the concept of "environmental security." Asked to attempt a definition, he replied with "avoiding danger to life in the case of a major environmental accident." He was optimistic about the potential for technology development and transfer and did not subscribe at all to neo-Malthusian views of Third World populations destroying the environment. "More people can lead to less degradation," he told me.

Although I had spoken with the wrong man, this interview was a useful introduction to the fact that environmental security is not on everyone's mental map, and moreover, that it is open to multiple interpretations. These range from crisis management during a chemical or nuclear accident, to cleaning up toxic wastes on military bases, to inter-state 'water wars', to international cooperation on climate change, to population explosions and the mass exodus of environmental refugees, to name but a few.

Just as varied are the motives behind the concept's deployment. A European

Union (EU) space program official told me environmental security was a code word for "the crossover between the military and the environment," particularly the use of military satellites for environmental surveillance. Another EU official said it highlighted the threat North African migrants posed to Europe. An IR scholar cynically noted that it was the outgrowth of Cold War intellectuals looking for new raisons d'etre and sources of funds.

Members of the U.S. intelligence community described it as a forecasting method to better prepare for peace-keeping missions, a mechanism for drawing NGOs into the information-sharing process, and "a packaged way of providing a systematic rationale for paying attention to the Third World with the collapse of the Cold War." Others similarly believed it was a benign way to bring Third World development, environment and women's rights issues to the attention of policymakers. "Anything that gets us out of frozen security speak gets us a nice gain," remarked a senior foundation official. Perhaps the most apt comment of all was that like the term sustainable development, environmental security is essentially "an empty vessel you can fill."

Expanding the metaphor, one might say that the cup now runneth over. Although most observers agree that interest in environmental security peaked in the mid-1990s in the U.S., it has generated a voluminous literature which shows no sign of slowing to a halt. Furthermore, the idea is currently taking off in British defense and foreign policy circles, and there are moves afoot, spearheaded by the German government, to create an international environmental security council.

Aside from its multiple interpretations and uses, environmental security has proved such a sturdy vessel for several key reasons. It fits well with the academic and

policy enterprise of redefining security in the aftermath of the Cold War, as well as with increasing international interest in the ramifications of Global Environmental Change (GEC). As such, it appeals to both natural and social scientists, though most scholarship on the subject has come from the IR field. Within IR, it is a paradigm transcender, diffuse enough to embrace multiple views of the state and to attract both Realists and non-Realists. For critics, it has proved a useful term to react against, though in the process many have been drawn into the epistemic fold.

Its appeal is also due to the strong neo-Malthusian assumptions in much of the literature, which mesh so well with Hobbesian visions of scarcity and anarchy and reinforce conventional Western views of the relationship between population and resources in the Third World. Prominent in the literature are what I call "degradation narratives," whose basic story line is that population pressures and poverty cause environmental degradation and resource scarcities, which can then induce migration and violent conflict. Or as Vaclav Smil puts it: "eroding slopelands = environmental refugees = overcrowded cities = political instability = violence" (Smil 1997:108). This story line was in existence before environmental security became popular, and no doubt will survive its passing. However, it has played a very important role in sustaining the enterprise and expanding its audience.

This chapter looks at the field of environment and security primarily through the lens of degradation narratives and the ways in which they naturalize fundamentally social, economic and political processes. Part One traces the origin of these narratives in the colonial period and their incorporation into the concept of development and sustainable development. Part Two examines the evolution of the environment and

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security field within the larger project of redefining security during the Cold War and the role of survivalism and degradation narratives in that project. Part Three analyzes how the narratives have been incorporated into liberal visions of stewardship and environmental security and conflict theories in the post-Cold war period. Part Four explores related narratives such as the dangerous rain forest, migrating microbes, the youth bulge, women's uncontrolled fertility, and water wars, while Part Five offers some concluding remarks.

My intention in this chapter is not to do the widest possible inventory of the environment and security field -- that would be a thesis by itself -- but to focus on one important dimension, the degradation narrative, that has profoundly shaped the field's understanding of the dynamics of poverty, environmental degradation and violence in the South. In rejecting the degradation narrative, the Dutch official with whom I spoke was the exception, not the rule.

I. THE DESTRUCTIVE PEASANTRY:

THE EVOLUTION OF THE DEGRADATION NARRATIVE

The belief that poor peasants are responsible for most land degradation in the Third World is a primary assumption of the degradation narrative whose roots reach back to the colonial era. While colonial administrators and scientists had significant differences of opinion on the causes of tropical environmental degradation (Grove 1995), in many places peasant agricultural practices were blamed for soil erosion, deforestation and desertification. This phenomenon has been well documented in the case of Africa.

In areas of settler agriculture in eastern and southern Africa, for example, land expropriation policies "demanded both the creation of a conceptualization of the African peasant as 'backward' and 'inefficient', and the privileging of environmental knowledge based on Western experience" (MacKenzie 1995:102). Critical to this process was the silencing of local agricultural knowledge systems, particularly gender-based ones.

There were a number of biases in colonial understandings of African environmental change. Chief among these were the idea of a 'climax vegetation community,' an ostensible causal link between devegetation and declining rainfall, and the notion of carrying capacity in which a given set of ecological conditions can support only a fixed number of people and livestock. These ideas were grounded in a conception of ecological equilibrium, in which environmental change was a linear deviation from an idealized norm (Leach and Mearns 1996).

The idealized norm in turn was influenced by the perceived 'value' of the resources in a given environment. Since in Africa professional foresters valued the closed-canopy or gallery forest most highly, any conversion of it by local people was seen as 'degradation.' Yet, as Leach and Mearns point out,

> such conversion may be viewed positively by local inhabitants,
> for whom the resulting bush fallow vegetation provides a greater range of
> gathered plant products and more productive agricultural land. Thus the
> same landscape changes can be perceived and valued in different ways
> by different groups; what is 'degraded and degrading' for some may for
> others be merely transformed or even improved (12).

The extent of degradation in Africa was (and still is) often overstated not only due to value bias, but faulty scientific methodologies. The exclusion of historical data on landscapes, for example, led to speculative projections about the past which romanticized previous environmental conditions. Or conditions at a particular time were

assumed to be representative of an abiding state of affairs. For example, the low population densities found in East African savannahs at the beginning of the 20th century were viewed as the norm by colonial administrators, but in reality they were the result of a severe depopulation of humans and livestock as the result of recent war, famine and disease (Leach and Mearns 1996).

In areas that clearly became degraded, such as the Ukambani Native Reserves in Kenya, colonial administrators blamed overpopulation of people and livestock even though the origins of the problem were largely external, involving, for example, the expropriation of lands by European settlers, disruption of traditional land tenure and land use systems, and unfavorable integration within the national and global economy (Rocheleau et al 1995). In the 1920s and 1930s European settlers mounted a campaign to depict African agriculture as a scourge on the land. "The African people have never established a symbiotic relationship with the land," stated a witness before the Kenyan Land Commission. "They are, in the strict scientific sense, parasites on the land, all of them" (cited in Rocheleau et al 1995:1042).[1]

This image of not only a backward, but a destructive peasantry carried over into post-World War Two development thinking. The notion of a singular, ahistorical peasantry itself is part of a larger process which Escobar terms "discursive homogenization," in which the poor are constituted as universal subjects, with little regard for differences outside of certain vague client categories such as malnourished, small farmers, landless laborers, etc. (Escobar 1994:53,106). Meanwhile, "discourses of hunger and rural development mediate and organize the constitution of the peasantry as producers or as elements to be displaced in the order of things" (107).

Neo-Malthusianism assumptions became increasingly prominent in these discourses from the 1960s on, serving as a common explanation, for example, for famines in Ethiopia and the Sahel (Franke and Chasin 1980). These famines meanwhile generated a media and NGO image industry which enforced old colonial perceptions and depicted Africans either as war-like and unstable, or as passive, helpless victims in need of Western charity. These images were also gender stereotyped, with men shown as decisive and aggressive and women and children as weak, unprotesting victims of circumstance (van der Gaag and Nash 1987).

Within large international agencies like the World Bank, degradation narratives came to serve as a rationale for both rural development and population control interventions. A World Bank publication on sub-Saharan Africa noted:

> The pressure of population is causing desertification to accelerate, because it forces people and their livestock farther into the marginal grassland. The productive capacity of land is failing because of shorter rotations, soil erosion and overgrazing. Growing population also raises the demand for fuelwood and cropland, and the resulting deforestation increases runoff and erosion, lowers ground water levels, and may further reduce rainfall in arid areas (World Bank 1989:22, cited in Williams 1995:158).

Ignoring the great variety and complexity of African agricultural practices, the Bank characterized them mainly as slash and burn and nomadic livestock raising, both of which became destructive under conditions of rapid population growth. The solutions set forward were the introduction of Green Revolution technologies, privatization of land rights, and contraceptives -- all requiring Western finance and expertise. Meanwhile, the Bank neglected the ecologically damaging impact of the mechanized, chemical-intensive farming it was promoting (Williams 1995).

In his case study of Lesotho, Ferguson similarly notes the use of such generic

narratives by development agencies to frame the country's problems and the agencies' solutions (Ferguson 1994). Emery Roe has coined the phrase "crisis narrative" to describe the stereotypical population/scarcity scenarios applied indiscriminately to different African countries and designed to justify the intervention of Western development agencies. Crisis narratives read as follows:

> The birth rate of [fill in name of country] is rising; human and animal populations bound forward exponentially; overutilization of the country's scarce resources accelerates; the government tries to create jobs but is less and less able to do so; rural people pour into the cities and the government's rural development policies are helpless in stemming the tide; political unrest becomes explosive, while politicians and civil servants grow ever more venal; and unless something is done to reverse this process [fill in name of country] will become another basketcase...(Roe 1995:1065-1066).

Such narratives are not limited to Africa. In Nepal, Thompson charts and challenges the creation of the myth of "the ignorant and fecund peasant" who not only destroys the mountain environment but causes devastating floods downstream (Thompson 2000).

Degradation narratives have persisted despite important challenges from within the development field. One of the earliest was Ester Boserup's book The Conditions of Agricultural Growth (1965), which argued that population growth was the driving factor behind agricultural revolutions and increases in productivity. In 1987, Blaikie and Brookfield's book Land Degradation and Society offered a systematic analysis of the causes of land degradation across regions and time periods, challenging the common hypothesis that population pressure on resources was chiefly to blame. Instead, the authors called for a regional political ecology approach which would address the complexity and specificity of land use practices, focusing in particular on the social and economic constraints faced by 'land managers.'

While this critical literature had an impact on the development field, it had little

influence on the emerging concept of sustainable development in the late 1980s.

According to Adams, this is because the roots of sustainable development were not in

development theory, but rather in Northern environmentalism with its quite limited

understanding of Third World political economy and ecology (Adams 1995). The

concept of sustainability linked three important discourses: the global environmental

crisis, neo-Malthusianism, and "the terrifying map of global inequality" (Peet and Watts

1996:2). Superimposed on rural areas of the Third World, this meshed well with the

degradation narrative, albeit with a slightly different twist.

Liberal sustainable development advocates were more willing to acknowledge

the role of social and economic disparities, such as unequal land distribution, in the

creation of rural poverty, so on first inspection their analyses appeared more sympathetic

to the poor. As their argument proceeded, however, these inequalities would fade from

view. The poor made themselves even poorer by having too many children, setting in

motion a vicious downward spiral of increasing poverty and environmental degradation.

"[I]t is through population that inequality and expropriation work their impact on the

environment," wrote Paul Harrison.

> They confine the oppressed to a smaller area, and artificially
> boost population density. Natural population growth goes on to feed that
> density, and worsens the problem. In most countries population growth
> is now the main factor pushing people into marginal areas (Harrison
> 1992:131).

The main policy implication of this analysis is that family planning is the solution to

both poverty and environmental degradation; women's fertility is at the center of the

population, development and environment triangle (Hartmann 1997).

In the mid-1980s sustainable development incorporated the notion of 'environmental refugees' into its lexicon, expanding the degradation narrative in the process. Black (1998) points to the diverse motivations behind the concept. Clearly, environmental degradation and disaster can spur migration when they undermine people's livelihoods, but this has long been the case. The particular interest in 'environmental refugees' beginning in the mid-1980s can be attributed to Northern policymakers' interest in depoliticizing the reasons for population displacement so as to weaken refugee claims for political asylum, as well as more benignly, to environmentalists' desire to focus policy attention on environmental degradation issues. Certainly, some of the main proponents of the 'environmental refugee' concept are environmental scientists, Norman Myers being a case in point (Black 1998).

Myers has claimed (without any substantive evidence) that there are 25 million environmental refugees in the world, mainly from sub-Saharan Africa, South Asia, China, Mexico and Central America, people who "can no longer gain a secure livelihood in their homelands because of drought, soil erosion, desertification, deforestation and other environmental problems." Their numbers will likely expand as "increasing numbers of impoverished people press ever harder on over-loaded environments" (Myers 1995:1). Myers identifies population pressure as central to the process: in many cases environmental refugees can be viewed as "population pressure" refugees (63).

Such views of environmental refugees not only reinforce the neo-Malthusian assumptions of the degradation narrative, but help expand it to include violent conflict as the tragic end to the story. As Black (1998) notes, whatever the precise number and definition of environmental refugees,

a common feature of the literature is to talk of 'millions' of displaced people, and their dramatic impact on host regions, such that regional security is threatened. The image is one of misuse or overuse of the environment leading to progressive decline in the resource base, and possibly contributing to further dramatic (and unintended) environmental collapse. Environmentalists and conflict specialists see common cause in talk of 'environmental refugees'; even if the linkages between conflict and refugees remain to be proven (23).[2]

As we shall see, the displacement and movement of marginalized people form the main link between the degradation narrative and (in)security concerns: their migration to other rural areas incites ethnic tensions; their young unemployed sons gravitate to political extremism in already overcrowded cities; and when they cross international borders, they threaten national social and cultural cohesion. Part Two addresses the ways in which the degradation narrative, with its focus on both the destructive peasantry and destructive migrants, intersected with the broadening of security during the Cold War.

II. UPPING THE ANTE: POPULATION, ENVIRONMENT AND RETHINKING SECURITY DURING THE COLD WAR

In order to understand how the degradation narrative interacted with the rethinking of security during the Cold War, Part Two first considers the relationship between military and non-military approaches to national security in the U.S. This is followed by an examination of the survivalist neo-Malthusian assumptions found in prominent challenges to conventional security thinking. These assumptions in turn helped pave the way for the acceptance of the degradation narrative in environment and security circles in the period leading up to the end of the Cold War.

From Throw Weights to Development Aid

There has never been a clear consensus on what exactly 'national security' means (Romm 1993). Especially during the first decade after World War Two, American security intellectuals thought of the subject in much broader terms than nuclear deterrence. Security was considered one among several important values; scholars noted the trade-off between pursuing military strength and expanding economic welfare and individual freedom. Moreover, in the pursuit of national security, non-military means of statecraft were of equal importance to military ones (Baldwin 1996).

The Marshall Plan for the reconstruction of Europe similarly embodied a broader vision of security, in which economic development and political stability were the key to fending off Soviet advances. This was also the rationale behind the land tenure, educational and political reforms the U.S. occupying forces implemented in Japan, South Korea and Taiwan. However, the successes of the Marshall Plan and more inclusive concepts of national security "were soon smothered by the series of military exigencies that defined the beginning of the Cold War," as national security became a matter of quantifiable military parity between the U.S. and Soviet Union (Evans et al 2000:13-14).

In Vietnam, however, brute military force proved insufficient to win a war against a popular guerilla army, causing men like Robert S. McNamara, Secretary of Defense under the Kennedy and Johnson administrations, to reassess "the essence of security." On the eve of his career transition to World Bank president, McNamara wrote that although military might was essential, the stability of rich nations was affected by the stability of poor ones, and in the long run the latter was a function of development:

That is obvious enough in the case of those impoverished nations

whose people are seething with growing frustrations, nations racked with famine and disease and the cruel pressures of expanding populations on diminishing resources...How many twilight wars of insurgency -- wars feeding on the frustrations born of underdevelopment -- the affluent nations will be content to witness before they take the only sensible steps possible to cure the malady at its source...They will reach a point of realism at which it becomes clear that a dollar's worth more of military hardware will buy less security for themselves than a dollar's worth more of developmental assistance (McNamara 1968:160-162).

McNamara's realization was less an epiphany than a change in emphasis. While military parity, or superiority, vis a vis the Soviet Union was the top priority during the Cold War, the U.S. government also used development assistance to advance its strategic interests. It frequently channeled 'Food for Peace', for example, to politically volatile urban middle classes in countries like Bangladesh in order to secure their allegiance to U.S.-backed regimes (McHenry and Bird 1977). And as we saw in the last chapter, there were various security rationales behind population assistance: population control would expedite modernization in the Third World, serving to stave off the Communist menace, help secure U.S. access to vital raw materials, and decrease the number of potentially radical disaffected youth. During his tenure at the World Bank, McNamara himself made population control a central element of development planning.

In contrast to dropping bombs, the development assistance strategies of U.S. Cold War foreign policy may appear more benign, but there was no dearth of evidence of their ill effects, especially when combined with counter-insurgency (e.g. McCoy 1971; Fitzgerald 1972). What was 'developed' was usually the economic and political power of friendly elites, while the living standards of the poor stagnated or declined. Leftist scholars and activists took up these issues, relating them not only to Vietnam but to U.S. policies in Latin America (e.g. Galli 1978), but their critiques of modernization

theory and foreign aid had remarkably little effect on the subsequent rethinking of security by peace and anti-nuclear advocates.

There are a number of possible explanations for this. Many members of the anti-imperialist left were either unwilling or unable to engage with the foreign policy community, with the brief exception of the Carter administration which was initially more open to critical voices, especially in regard to human rights. The idea of reforming the national security apparatus seemed a naive proposition, especially when many activists were targeted by that same apparatus through harassment, phone-tapping, etc. (Churchill and Vander Wall 2002). Meanwhile, within the academy, their critiques had difficulty permeating the narrow disciplinary boundaries of IR and even the nascent Peace Studies field, where knowledge of development debates and controversies remains underdeveloped still today.[3]

There was also a difference of focus. Whereas the left targeted the American state, those rethinking security on a conceptual level were going global, influenced by survivalist environmental discourses such as limits to growth. In the process many of them unquestioningly accepted neo-Malthusian explanations of resource scarcity, environmental degradation and conflict. As the next section illustrates, the result was the reinforcement of Third World stereotypes by what were seemingly progressive critiques of Cold War concepts of national security.

Population and Planetary Danger

One of the first works that took a global environmental approach to redefining security during the Cold War was Princeton University professor Richard Falk's This

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Endangered Planet (1971), in which he presented the war system, population pressure, scarcity of resources, and environmental overload as the four main dimensions of "planetary danger." "In many ways population pressure underlies the entire crisis of planetary organization," Falk wrote, citing Hitler's call for Lebensraum. "It is simplistic to conclude that population increase *as such* causes war," he went on to say, "but it builds the conditions whereby violence is likely to play a larger and larger role in the internal and external affairs of states." Falk claimed, for example, that population-induced migration toward urban areas encourages repressive systems of government and extremist revolutionary strategies of violence (155-6). It is noteworthy that Falk was writing at the height of the Vietnam War.

Six years later Lester Brown of the Worldwatch Institute explicitly called for a redefinition of national security. He warned that world oil reserves were shrinking, biological systems deteriorating, and population pressure destroying the resource base. His causal chain presages later logics of environmental conflict which naturalize economic and political dynamics:

> The military threat to national security is only one of many that governments must now address. The numerous new threats derive directly or indirectly from the rapidly changing relationship between humanity and the earth's natural systems and resources. The unfolding stresses in this relationship manifest themselves as ecological stresses and resource scarcities. Later they translate into economic stresses -- inflation, unemployment, capital scarcity and monetary instability. Ultimately, these economic stresses convert into social unrest and political instability (Brown 1977:37).

On the positive side, Brown called into question the disproportionate amount of resources spent on armaments, but at the same time he reinforced a dismal Malthusian view of a famine-stricken, ecologically degraded Third World.[4]

Meanwhile, in more traditional foreign policy circles the oil crises of 1973 and 1979, and more general concerns about vital resource shortages, led strategic analysts to move beyond purely military definitions of security (Frederick 1999). However, the assumption was that if necessary, military means would be employed to secure resource access, such as the Carter administration's Rapid Deployment Force for the Middle East (Dalby 1999). Lipshutz and Holdren argue, however, that the problem of access to resources did not exercise a major influence on U.S. foreign policy (Lipschutz and Holdren 1990).

The impetus to redefine security also came from the anti-nuclear and disarmament movements. In 1982 the Independent Commission on Disarmament and Security Issues (known as the Palme Commission) endorsed the concept of "common security" -- the idea that the annihilating potential of modern warfare was such that security could only be assured by states recognizing their mutual vulnerability and pursuing mutual cooperation and disarmament (Dalby 1992).

Within some sectors of the peace research establishment there was a synergy between concerns about nuclear war and neo-Malthusian environmental survivalism. Arthur Westing is a case in point. Westing is more generally known for advocating "comprehensive security," in which military, economic, social and environmental security are inter-dependent and cannot be achieved separately from each other (Sooros 1997). However, he also held extreme views on population control. In his book Cultural Norms, War and the Environment (1988) he maintained that population growth was the main cause of environmental exhaustion and warned that "the huge mismatch between human population numbers and availability of natural resources" helped provide "the

support and impetus for the acceptability of war" (5). He called for drastic population control measures such as giving each adult a "child-right chit" entitling the holder to have only one child; in overpopulated countries (those whose development indicators were unfavorable compared to developed nations) there would be only one chit for every two adults (153). In a strange parallel with tradeable pollution permits, these chits would be transferable and negotiable commodities within nations. The fact that Westing's 'child-right chit' scheme appears to have elicited little or no critical reaction in the peace and environment literature indicates just how acceptable coercive population control measures were considered at the time.

While Falk, Brown and Westing's views of planetary danger did not specifically embrace the degradation narrative, they helped establish population pressure on the environment as a major security concern. It was not such a cognitive leap from there to the degradation narrative. In fact, each helped reinforce the other in the period leading up to the end of the Cold War.

Elevating the Degradation Narrative

One of the first articles on redefining security to make that leap was IR scholar Richard Ullman's influential piece in the prestigious journal International Security (Ullman 1983). Taking a different tack from the globalists, Ullman tied the extension of security to the traditional Realist view of the state. He argued that defining national security in purely military terms causes states to ignore other more harmful dangers, thus reducing their total security. Among the possible dangers, he mentioned interruptions in the flow of critically needed resources, a drastic deterioration of environmental quality

due to sources inside or outside a state, and domestic urban conflict possibly fomented by "the presence of large numbers of poor immigrants from poor nations" (Ullman 1983:134). These dangers become a national security concern when they threaten drastically and over a short period of time to degrade the quality of life for a state's inhabitants and narrow the range of policy options available to the government and private organizations (133).

Ullman's article espoused a version of the degradation narrative based on firewood:

> As third world villagers cut down more and more forests in their search for fuelwood, the denuded land left behind is prey to erosion. Rains carry topsoil away, making the land unfit for cultivation. The topsoil, in turn, silts up streams in its path. Meanwhile, the fuel-short villagers substitute dung (which otherwise they would use for fertilizer) for the wood they can no longer obtain, further robbing the soil of nutrients and bringing on crop failure. Unable to sustain themselves on the land, many join the worldwide migration from the countryside into cities.

These cities meanwhile are "forcing grounds for criminality and violence" (141). He concluded that population growth in the Third World is a national security concern since it is bound to degrade the quality of life and limit the options available to "governments and persons in the rich countries" (143).

Our Common Future, the 1987 report of the U.N. World Commission on Environment and Development, elevated the degradation narrative to the status of received wisdom and drew an even closer connection to violence. Chaired by the former Prime Minister of Norway, Gro Harlem Brundtland, the commission is known for putting sustainable development on the international policy map.[5]

The report takes a conventional neo-Malthusian view of population pressure

contributing to poverty and resource depletion by slowing rises in living standards and exceeding the carrying capacity of the land (World Commission on Environment and Development 1987). In turn it identifies poverty as a major cause of environmental degradation:

> Those who are poor and hungry will often destroy their immediate environment in order to survive. They will cut down forests; their livestock will overgraze grasslands; they will overuse marginal land; and in growing numbers they will crowd into congested cities (28).

The agents of poverty in effect become the poor through the destruction of their own local environments; in sub-Saharan Africa in particular there is a "vicious cycle of poverty leading to environmental degradation, which leads to even greater poverty" (31). The forces that generated poverty in the first place are thus removed from the picture.

Although the Brundtland report distinguishes nuclear war as the gravest danger to the environment and security, it identifies environmental stress as an important source of conflict, noting in particular the destabilizing effects of "environmental refugees." It accepts analyses by USAID that Haitian emigration is due to environmental degradation, and that the causes of the war in El Salvador are as much environmental as political, resulting from resource distribution problems in an "overcrowded" country (292). It uses the language of national security threats (6), and advocates the use of the most sophisticated surveillance technology to establish an early warning system to monitor indicators of environmental risk and conflict, such as "soil erosion, growth in regional migration, and uses of commons that are approaching the thresholds of sustainability" (302).[6] In this sense, it presages more recent developments in environmental surveillance and securitization (see Chapter Six).

While rethinking security in environmental terms is largely viewed as a Western

enterprise, the Soviet leadership most strongly promoted the concept of environmental security in the late 1980s in the wake of the Chernobyl disaster. At the 1988 U.N. General Assembly Mikhail Gorbachev and Eduard Shevardnadze proposed "an international regime of ecological security" as well as an implementation plan, although they met with little support from other U.N. members (Sooros 1997:239). Dalby argues that the Soviets, in fact, undertook a major rethinking of their security policy from the mid-1980s, favoring political over military means of navigating the superpower relationship. This, in turn, significantly contributed to the "unraveling of the Cold War system," calling into question the Western triumphalist story that the West won because of the superiority of its institutions and security policies (Dalby 1997:12-13).

It was the Western triumphalist story which triumphed, however, as the fall of the Berlin Wall supposedly signaled the end of history. However, the end of history was also a beginning of sorts: in foreign policy circles rethinking security moved from the realm of marginal to the realm of necessity. The collapse of the Evil Empire created a vacuum that needed to be filled.

One of the first to heed the opportunity was Jessica Mathews, then Vice-President of the World Resources Institute (WRI), who had also served on the Carter administration's National Security Council. WRI was founded in 1982 with funds from the MacArthur Foundation, and one of its first projects, spearheaded by Mathews, was exploring the "U.S. Stake in Global Resource Issues" (Lipschutz n.d.). The project produced a book edited by Janet Welsh Brown, In the U.S. Interest (1990), which linked population, environment and conflict in the Third World directly to U.S. national security.

Looking forward to a post-Cold War policy climate, Mathews herself wrote in Foreign Affairs that "The 1990s will demand a redefinition of what constitutes national security." In the 1970s, she argued, the U.S. had been forced to acknowledge its economic interdependence, but now resource, environmental and demographic issues also no longer fit with old unilateralist assumptions and institutions. "Environmental strains that transcend national borders are already beginning to break down the sacred boundaries of national sovereignty, previously rendered porous by the information and communication revolutions and the instantaneous movement of global capital," she commented (Mathews 1989:162).

Mathews proposed a wide reform agenda, including a new era of U.S. multilateral diplomacy, more effective international regulatory regimes and more sustainable economic growth and technological development. She also advocated more support for family planning since, like others before her, she identified population growth and resource depletion as major causes of political unrest, authoritarian government, external subversion and the creation of environmental refugees (168).

Although there was nothing very new about Mathew's analysis, the article appeared in the right venue at the right time; her commitment to global environmental security and multilateralism served to "coax policymakers away from conventional realist positions" on national security based on military force (Matthew 1995:18). However, in terms of the understanding of environmental issues, what they were coaxed towards left much to be desired.

By the end of the Cold War, survivalism had succeeded in inspiring apocalyptic fears of the destructive capacity of Third World reproducers, while the degradation

narrative provided the causal logic that linked them directly to poverty, environmental degradation, migration and violence. Part Three looks at the evolution of the post-Cold War environment and security field in this light.

III. WHOSE ENVIRONMENTAL SECURITY?

The end of the Cold War extended the concept of security in what Emma Rothschild calls a geometry of "dizzying complexity." The concept of security has been extended downwards from nations to groups and individuals, upwards to the international system and biosphere, and horizontally to include not just military but "political, economic, social, environmental, or 'human' security." And finally, the responsibility for maintaining security has been extended in multiple directions to the institutions of civil society as well as to various levels of government from the local on up (Rothschild 1995:55). The politics of extending security were substantially different in the 1990s than the decades before, writes Emma Rothschild, because they "engaged the theorists as well as the critics of military establishments" (Rothschild 1995:59).

In this extension of security, the environment and security field occupies pride of place. It grew so much in the 1990s that now there are not only many different definitions of environmental security, but also different opinions about how one should go about categorizing those definitions. "It is only at a very high level of generality that one can speak of environmental security as a clear and distinct concept appropriate to the entire world," Richard Matthew notes. According to him, environmental security has three main characteristics: it is a condition in which environmental resources are used sustainably, there is fair and reliable access to them, and competent institutions exist to

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manage the crises and conflicts associated with environmental scarcity and degradation (Matthew 1999:13).

He goes on to identify four different conceptualizations of environmental security. The *deep ecology* approach focuses on the security of the entire planetary environment, the *human security* approach on the social justice dimensions of environmental access, and the *national security* approach on greening the military, environmental surveillance, and conflict prediction, prevention and resolution. The *rejectionist* approach meanwhile opposes the linking of environment and security because environmental change seldom poses a conventional security threat and security agencies are the wrong institutions to manage environmental problems (Matthew 1999). Here Matthew is referring mainly to the work of Daniel Deudney (e.g. 1991) who strongly articulated the rejectionist approach.

Thomas places concepts of environmental security on a continuum between narrow and broad interpretations, depending on their perspectives on the scope of policy change (whether it is simply rhetorical, or involves either limited or deeper institutional reforms); policy implementation (top-down or bottom-up); the role of the state (sovereignty preserving or eroding); the position on information access (secretive or open); and the larger understanding of security (whether it is viewed negatively, as the absence of external threats, or positively, so as to include concerns such as equity and environmental justice). He concludes that so far the U.S. national security establishment has employed a more narrow interpretation, favoring secrecy, for example, over sharing environmental data with a wide range of civilian institutions (Thomas 1997).

For Barnett environmental security is a contested idea rather than a theory or

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discourse. While his book set outs to find the meaning of environmental security, he begins with a definition of environmental insecurity as "the vulnerability of people to the effects of environmental degradation." Environmental degradation is in turn "a function of resource- and pollution-intensive forms of development coupled with poverty-driven rapid population growth" (Barnett 2001:17,12). Barnett positions the various interpretations of environmental security on a continuum between a positive peace/proactive policy and a negative peace/reactive policy, where the former refers to the "absence of structural violence manifested as the uneven distribution of resources" and the latter "the absence of direct violence that causes physical harm" (4).

While viewing environmental security as a "contested idea" rather than a discourse makes for a more clear-cut taxonomy, it does not adequately recognize the synergy between different interpretations which play out in real world real politics. I would argue that environmental security has become a discourse in the broad, dynamic Foucaultian sense of a power center, a bounded area of social knowledge which both constrains and enables thinking and action. Many of its various interpretations, whether left or right, narrow or broad, or ostensibly at odds with each other, are tied together by certain common normative assumptions and hegemonic myths regarding population growth and the environment. Arguably, these constrain thinking, even as they enable certain actions and actors. Even the most well-known rejectionist argument against linking environment and security (Deudney 1991), which came to define the opposition, did not critique its neo-Malthusian suppositions.[7]

In the following sections, I look at some of these key normative assumptions and hegemonic myths, starting with the identities of "us" and "them" and their crude

demographic representations. The discussion then focuses on the first and second waves of environmental conflict research, the interpretations advanced by military and intelligence analysts, and whether or not human and ecological security concepts challenge the prevailing orthodoxy of the degradation narrative.

Establishing the 'Us': Universalism, Stewardship and Superpower

In his book Earth in the Balance, written before he became vice-president, Al Gore remarked that:

> [T]he task of restoring the natural balance of the earth's ecological system is both within our capacity and desirable for other reasons -- including our interest in social justice, democratic government, and free market economics. Ultimately, a commitment to healing the environment represents a renewed dedication to what Jefferson believed were not only American but universal inalienable rights: life, liberty and the pursuit of happiness (Gore 1993:270).

In this passage Gore expresses a central assumption of U.S. post- Cold War environmentalism: that American values are in fact universal, and that the pursuit of free market capitalism is the road to both personal happiness and planetary health. Gore goes on to call for a "Global Marshall Plan" to address the environmental crisis, the first strategic goal of which is stabilizing population growth.[8]

Since its first inceptions, much of the environmental security literature has been seeped in such American and Western universalism. It is "we" who define what is wrong with and good for the global environment. No doubt this "we" has a multiple personality which includes more traditional national security strategists as well as those who want to reach beyond the narrow confines of the state to embrace a greener, multilateralist foreign policy. In either case, however, "we" are on a mission.

In more liberal circles this mission is known as "stewardship." According to this reasoning, the U.S. has a triple responsibility as the world's premier superpower. It must not only maintain its military and economic strength, but exercise stewardship through foreign aid, NGOs and the private sector to address potentially destabilizing problems in the Third World, such as resource scarcities and widening gaps between rich and poor. While acknowledging that Cold War strategies of containment "sometimes" were at variance with social stewardship objectives, advocates believe those contradictions no longer exist (Mazur and Sechler 1998:20). Stewardship is a win-win approach, in which neo-liberalism and American hegemony are instrumental to human development and environmental improvement.

That it is our mission, and not necessarily that of others, is helpfully obscured by the language of globalism, including that of global environmentalism change (GEC). The dominant construction of GEC is a Western, state-centric one, with "crass neo-Malthusianism" as the subtext (Saurin 1996:77). Its

> hegemony manifests itself in the uncritical -- and indeed profoundly anti-social and anti-historical -- acceptance of the estimation of environmental impacts from the aggregation of individual impacts, quite regardless of the highly differentiated social origins of that change (81-82).

GEC is defined in terms of aggregate physical outcomes -- the amount of greenhouse gases released or water polluted -- and studied in terms of the international (inter-state) institutional responses to these phenomena, ignoring the capitalist processes of expropriation, production and exchange which often generate environmental degradation in the first place (Saurin 1996).

Moreover, environments everywhere are deemed part of the 'global commons'

and thus in need of global, centralized control (Hawkins 1993). This control is largely vested in the hands of Western governments and conservation agencies, with environmental stewardship translating into the right to use or support police powers for environmental protection in other lands. For example, according to conservationist John Oates (1999), it is appropriate for foreigners to subsidize policing costs of nature protection in developing countries if the area is regarded as "internationally significant" and local agencies cannot foot the bill (240). Luke (1999) argues that this represents a new stage of 'enviro-discipline': A powerful nation state like the U.S.

> is no longer empowered simply to defend its territory to protect its population...it must now also identify and police the surroundings in all of its many operational environments, to guarantee ecological stability, biological diversity and environmental interdependence. Because some states are more sustainable than others, their survival imperatives may become guide-lines for environmental colonialism (147).

The language of global environmentalism can also obscure different cultural perspectives on environmental problems, so that they become, in the words of Michael Redclift, "like a cultureless language, an Esperanto of the mind, that speaks to everybody and therefore, ultimately, to nobody" (Redclift 1997:14). However, speaking to nobody has its virtues because nobody speaks back.

The liberal stewardship "we" found in so much of the environmental security literature largely favors increases in American foreign aid and "democratization" in the Third World. While this is preferable to conservative isolationism, the summons to American universalism has a dark side too. "For such universalism to take root," Stoett notes, "the image of a frightening outside world must first be created" (Stoett 1999:19). Or as a senior foundation officer bluntly told me, "People will get more aid if they are

perceived to be dangerous than if they are pitied."

Campbell argues that articulation of outside threats, and their representation as "alien, subversive, dirty or sick," have long been fundamental to American foreign policy. They not only help sustain an aggressive military posture, but reinforce the need to secure the state against domestic sources of instability: "...resistant elements to a secure identity on the 'inside' are linked through the discourse of 'danger' with threats identified and located on the 'outside'"(Campbell 1998:3,68). With the end of the Cold War, Campbell writes, articulations of danger now focus on the Third World, particularly on disease, migration, and other population issues.

Furedi (1994) shares a similar view. The end of the Cold War has sparked the resurgence of a more open imperialist culture, with the Third World replacing the Soviet Union as the main threat to Western stability. At the same time it is harder to build a coherent Western identity because of significant domestic poverty and social malaise. "In these circumstances, Western politicians seek to gain moral authority through highlighting their relationship with other morally 'inferior' societies" (114); non-military problems in the Third World, notably overpopulation, are recruited to sustain the siege mentality. This "evolution of anti Third World ideology towards crude demography" means that "simply through the elementary act of reproduction, Third World peoples now threaten Western culture and societies" (118).

Certainly, this "crude demography" plays a major role in creating the "them" in the more sensationalist of the environmental security literature.

Establishing the 'Them': Fear, Loathing and Homogeneity

No one has done more currently to create the crude version of "them" than journalist Robert Kaplan. His 1994 Atlantic Monthly article "The Coming Anarchy," which proclaimed the environment as the most important national security issue of the 21st century, portrayed Malthus as the prophet of West Africa's future and the West African people themselves in racist language reminiscent of colonial times. Nowhere in "The Coming Anarchy" does one find an industrious peasant, male or female, which is not surprising since Kaplan seems to have never spent any time in an African village. Induced by overpopulation and environmental degradation, the chaos in WestAfrica and elsewhere directly threaten us because AIDS and crime know no borders. In "The Coming Anarchy" and other writings, Kaplan removes any hint of altruism from American policy:

> We should care for our own naked self-interest. AIDS is a product of the cycle of poverty, deforestation, migration and other pathologies of sub-Saharan Africa, which found its way to white, middle-class suburbs in an inter-connected world where there are no borders...As governments collapse and even as weak democratic regimes try to take over in these places, they are perfect petri dishes for the rise of organized crime networks, which are another threat to us (Kaplan 1996a).

As for solutions, he is critical of democracy, preferring the "honest" authoritarianism of Singapore's dictator Lee Kuan Yew (Kaplan 1996b:377), or the "quasi-authoritarianism" of Fujimori in Peru (Kaplan 2000:65). Authoritarian systems, he claims, create the middle classes necessary for stability and prosperity. Even in the U.S., "the last thing America needs is more voters -- particularly badly educated and alienated ones -- with a passion for politics" (89-90).

The Washington policy establishment reacted to Kaplan's alarmist fantasies not

with alarm, but with accolades. Timothy Wirth, then Under-Secretary of State for Global Affairs, faxed it to every U.S. embassy around the world (Richards 1996). Two staff members of a prominent environmental organization told me that many leaders of the mainstream environmental movement were also positively impressed by it.

Similar articles followed in Kaplan's wake. Some were by journalists, such as Jeffrey Goldberg's "Our Africa Problem" in the New York Times Magazine (1997), but others were by established security scholars, such as Yale University's Paul Kennedy. In the December 1994 Atlantic Monthly, Kennedy and co-author Matthew Connelly revisited Jean Raspail's controversial right-wing novel, The Camp of Saints, which describes the invasion of the French Riviera by over a million poor, dark-skinned and over-sexed Indians forced to leave their country because of the ravages of famine and overpopulation (Connelly and Kennedy 1994).[9] In order to prevent the wretched of the earth from overwhelming the Western paradise, Kennedy and Connelly argued for a new "North-South deal" to ameliorate demographic and environmental stresses. Like Kaplan, self-interest and Western security are the main motives, but unlike him, they favored a broader package of foreign assistance (including family planning, of course) more in keeping with the liberal version of stewardship.

Several years later Kennedy retreated from this position in advocating for a "pivotal states" approach to U.S. foreign policy. In an article in Foreign Affairs, his co-authors and he recommended that the U.S. focus its efforts on a small number of Third World "pivotal states" whose future could seriously affect the surrounding region or the U.S., through, for example, illegal immigration. These "new dominoes" need assistance not from external threats but internal disorder: "The threats to the pivotal states are not

communism or aggression but rather overpopulation, migration, environmental degradation, ethnic conflict and economic instability, all phenomena that traditional security forces find hard to address" (Chase, Hill and Kennedy 1996:36, also see 1999). Thus, a country like Haiti, which is geographically close to the U.S., is a more worthy candidate for intervention than Rwanda and Somalia where the U.S. has less concrete interests.

Richard Matthew contends that Kaplan and Kennedy (along with Jessica Mathews) have served as "vital but selective conduits between the academic and policy worlds" due in part to their knowledge of environmental change research and "sensitivity to the sort of language that will attract policymakers" (Matthew 1999:10-11). I would argue that it was Kaplan and Kennedy's portrait of a highly racialized and dangerous "them" which had the most appeal: here literally was the dark side to reinforce the white side of American universalism.

The irony is that appeal to these fears actually helps strip American universalism of its more positive aspects, such as the professed commitment to social justice and democracy, in favor of a more limited vision of American interests. Kaplan and Kennedy's understandings of environmental security reinforce the notion that development assistance should mainly be a function of security prerogatives, stabilizing "them," for example, by stabilizing population growth.

In recent years Kaplan and Kennedy's alarmist imagery has come under more critical scrutiny,[10] and many members of the environmental security field realize they need to leave it behind if they are going to attract more scholars and policymakers from the South to the table. However, even if not rendered explicit, the dark and dangerous

"them" lurks just beneath the surface of other crude demographic representations. The violent and destructive power of "them" underlies the degradation narrative, which in turn is deeply implanted in environmental conflict literature.

Environmental Conflict: First Wave and Second Wave

"Of the new sources of conflict, the combination of environmental and demographic pressures have received the most attention." So states a Rockefeller Brothers Fund review of the North American literature on the new security thinking (Florini and Simmons 1998:20). Thus, environmental conflict not only became the dominant area within the environment and security field in the 1990s, but in the extension of security in general.

The first wave of post-Cold War environmental conflict literature was more popular than scholarly, "unsupported by rigorous analysis" (Levy 1995:44). One of the first books to appear was Greenwar, published by the Panos Institute in 1991, which identified the African Sahel as an arena of environmental conflict. The book held the poor largely responsible for environmental degradation due to the pressures of population growth and dispossession which forced them to cultivate marginal lands. Environmental degradation, in turn, was assumed to play an increasingly important role in causing "social and political instability, bloodshed and war" (Twose 1991:1). In a 1998 interview, a staff member remarked that Panos' goal at the time was to get journalists involved in environment and development issues; the book was intended to generate public discussion rather than to present a deep analysis.

This desire to attract public attention may also help to explain the hyperbole in

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Norman Myers' book Ultimate Security (1993). Writing in a apocalyptic vein, Myers

maintained that the population explosion already generates violent discord and strife, and

is "the biggest factor of all" in causing environmental degradation. He went so far as to

claim that the bottom billion of the world's people -- the poorest of the poor -- "cause

more environmental degradation than the other three billion developing-world people

put together" (Myers 1993:22-23). Myers linked population pressure and environmental

degradation to civil wars in Africa and El Salvador, and suggested that in general fewer

people mean less conflict. "If there were half as many people in India and Bangladesh,

would they not suffer fewer conflicts?" he asked rhetorically (163). Presaging his later

work on environmental refugees, Myers warned that global warming could render 100

million people homeless: "whole waves of destitute humanity washing around the world

could soon start to pose entirely new threats to international stability" (27).

Coming out of the Worldwatch Institute, Michael Renner's Fighting for Survival

(1996) was more sensitive than Myers to the role of social inequalities and globalization

as causes of environmental degradation and instability. Nevertheless, he made similar

claims that population growth is outstripping the carrying capacity of the local resource

base in many countries, leading to mass migrations and conflicts such as those in

Rwanda and Chiapas. This analysis has become part of the standard Worldwatch world

view (see Brown, Gardner and Halweil 1999).

The second wave of environmental conflict research is more methodologically

sophisticated and academic than the first, though in fact many of the assumptions are the

same. One of the principal architects of the second wave is Canadian political scientist

Thomas Homer-Dixon. Homer-Dixon first made the link between environment and

conflict in the Fall 1991 issue of the prestigious journal International Security. He

submitted that poor countries were likely to be more vulnerable to environmental change

than rich ones, and that in these countries environmental pressures over time would

produce four main inter-related social effects: decreases in agricultural production,

economic decline, population displacements and disruptions in normal social relations.

These social effects would then lead to various forms of acute conflict, "each with

potentially serious repercussions for the security interests of the developed world"

(Homer-Dixon 1991:78). Homer-Dixon proposed a research agenda, which would

include case studies, to explore the causal pathways between environmental change and

acute conflict.

While this article caught the attention of the scholarly community, Homer-Dixon

also proved adept at reaching a wider audience. Some of his writing bears more in

common with the first wave than the second, although he disdains writers like Myers

whom he has accused of "an almost complete absence of empirical rigor and theoretical

structure" (Homer-Dixon, Levy, Porter and Goldstone 1996:49). A 1993 Scientific

American piece he co-authored was less cautious than his first article. It asserted, for

example, that

> scarcities of renewable resources are already contributing to
> violent conflict in many parts of the developing world. These conflicts
> may foreshadow a surge of similar violence in coming decades,
> particularly in poor countries where shortages of water, forests, and,
> especially, fertile land, coupled with rapidly expanding populations,
> already cause great hardship (Homer-Dixon, Boutwell and Rathjens
> 1993:38).

A spin-off op-ed in the New York Times called "Destruction and Death," with an

accompanying graphic of a tree with skulls hanging off its dead branches and

decapitated bodies littering the ground, advised the Clinton administration to consider the long-term links between ecological balance and mass violence, stressing in particular the role of population growth (Homer-Dixon 1993). A year later Homer-Dixon's work was featured in Kaplan's "The Coming Anarchy," increasing his fame.

Homer-Dixon went on to generate a much larger body of work focused on the link between renewable resource scarcities and intrastate violence, which is the subject of the next chapter. In addition, he influenced the development of other models by authors in Europe. While this work is largely academic in approach, it emerges not so much from the Ivory Tower as from policy institutes, with the attendant pressure to be policy-relevant and meet the needs of funders (see Chapter Five).

Among its destinations, the second wave of environmental conflict research washed up on the shores of the national security establishment. Haas (2002) argues that its appeal to traditional security policy networks lay in its ties to the Malthusian geopolitical approach to resource scarcity, which conformed with the Realist worldview. I would add that environmental conflict helped to put a new spin on resource scarcity by expanding the definition to include renewable as well as nonrenewable resources. In addition, the degradation narrative pinpointed the source of the problem -- peasants and migrants -- more clearly. It produced a new national security threat for defense and intelligence agencies.

Green Bullets and Flash Points

In Top Guns and Toxic Whales, a companion book for a TV documentary on environment and security, Prins and Stamp (1991) present a positive vision of a new

high-tech war room called Cassandra where military planners monitor threats to the global environment just as they would enemy aircraft. At the center of the war room is the Population Screen since population heads the list of environmental threats. In an accompanying picture a board flashes "Alert Status Green" over a map of Egypt, with the word population written over it (38-39).[11]

Fanciful as it is, this vision of an environmental war room is not so far off the mark. In the U.S. the military and intelligence communities have been some of the main institutional actors to embrace environmental security, albeit largely in a narrow interpretive sense (Thomas 1997). Environmental security has become a vehicle for promoting a mix of strategies: satellite surveillance of the environment, the development of environmental conflict early warning systems, integration of NGOs into intelligence-gathering, clean-up of toxic wastes, a means of promoting relationships with other militaries, particularly in the former Soviet empire, and the development of "greener" ammunition. In May 2001, for example, at around the same time that President George W. Bush, Jr. announced the U.S. would move ahead with the 'Star Wars' missile shield, the Army released information about its new bullet, "just as deadly as the old lead-based one but cleaner for the Earth." As an Army spokeswoman put it, "We want to be good stewards of the environment" (Jelinek 2001). Indeed, the Department of Defense (DOD) is now billing itself as the preserver of biodiversity through its stewardship of the vast tracts of land it controls for military testing and training. "Biodiversity helps us achieve military readiness in harmony with nature," claims Sherri W. Goodman, Deputy Under Secretary of Defense for Environmental Security (DOD n.d.).

While environmental conflict is only one out of many items on the national

security community's "green" agenda, the degradation narrative has certainly exerted a powerful influence on perceptions of the roots of violence in the Third World. Kent Butts, a professor of military strategy at the U.S. Army War College and one of the better known writers on the role of the military in environmental matters, argues that regional instability in the developing world has replaced the Soviet military threat as the greatest danger to world peace. A major cause of this instability is the pressure of "overpopulation, resource scarcity and failed agricultural policies" on newly democratic regional regimes, which results in "major refugee migrations across national borders" and "tensions that may encourage the acquisition of weapons of mass destruction" (Butts 1996a:22-23). Butts believes the U.S. Department of Defence and NATO are well-qualified to take on environmental issues (1996a, 1996b); intelligence assets, for example, can be used "for the good of the environment" by providing data for an "environmental crisis monitoring system" (1996a:25).

Butts has also written about European environmental security, recommending that NATO promote solutions to environmental problems in areas that are strategically important to Europe. This includes North Africa where population growth and resource scarcities drive conflict and migration and provide a fertile ground for radical Islam.

Butts is keen to use militaries in the developing world as an instrument of environment and development policy. He claims they are often the best organized and efficient organs of government and should be encouraged to undertake environmental projects "in areas populated by disenfranchised minority groups" (Butts 1996b:440). Furthermore, he suggests that a NATO environmental security assistance program "could capitalize on new USAID-built roads to distant regions of a given country to

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provide environmental assistance in the newly opened area, or assist USAID in broadening training programs to include the host government military" (446). Already, the U.S. military has been promoting "sustainable development" and resource conservation in Africa, giving military assistance to 20 countries for diverse activities such as fisheries management, anti-poaching programs including aerial surveillance, and constructing roads in game parks (Butts 1996a, 1999).

The degradation narrative has also impacted the intelligence community. In 1997, for example, the Central Intelligence Agency (CIA) hosted a workshop on "Environmental Flash Points," inviting IR and environment scholars and NGO representatives to help focus the work of its newly formed Director of Central Intelligence Environmental Center (DEC). The central premise of the DEC's Long Term Assessment effort, according to then Director Norman Kahn, "is the belief that environmental change -- especially degradation and resource scarcity, but positive change as well -- affects national and regional policies in ways that impact U.S. interests" (Kahn 1997:40). This premise is not entirely a new one. In 1984, for example, another CIA analysis of global flash points pointed to extreme population pressure, immigration and resource depletion as potential sources of conflict, especially in the developing world (Brown 1990).

Most of the regional background papers for the 1997 conference repeat familiar degradation narratives, and population pressure figures prominently in the matrices categorizing the risk factors related to environmental flash points. The search is clearly for some kind of early warning system which will show the CIA where American interests are threatened. As the authors of the sub-Saharan African study write, their

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analysis points to the potential usefulness of "a 'tableau de bord' to monitor environmental flash points in Africa," which would collate and track environmental, economic, health, demographic, agricultural and infrastructure data to determine trends. "The system could also be set up to flash 'warning lights' when indicator data moves outside of the 'normal' range -- either too low, too high, or an exceptionally rapid rate of change" (Winterbottom and Neme 1997:238). What the CIA's response would be when the warning lights started blinking provides grounds for speculation.

Chapter Six will look more closely at the impact of environmental conflict ideas and the degradation narrative on national security agencies, but as this section illustrates, they clearly have had an audience. The next section considers human and ecological security concepts to see if they pose a challenge to the degradation narrative.

Human and Ecological Security: A Challenge?

Some scholars have argued that less attention should be paid to researching the links between environment and violent conflict and more to the relationship of environmental change to *human security* (Lonergan 2000). These tend to be the more liberal developmentalist members of the environment and security field. In some of its articulations, however, human security embraces the same neo-Malthusian assumptions found elsewhere in the field.

According to the United Nations Development Program's (UNDP) definition, human security has two main aspects: first, safety from chronic threats such as hunger, disease and repression, and secondly, protection from sudden and harmful disruptions in the patterns of daily life. It is not so much proactively rights-based as imbued with the

spirit of neoliberal individualism. "The concept of human security stresses that people should be able to take care of themselves," writes the UNDP (UNDP 1994:24). Rendered secure, people become more effective participants in their own development.

According to the UNDP, unchecked population growth is first on the list of threats to human security. On the local level, it causes people to move to marginal areas where they are vulnerable to natural disasters; on the global level it is "at the root of global poverty, international migration and environmental degradation." "Excessive" international migration also makes the list of the top six threats, along with drug trafficking and international terrorism (36).

Such a vision of human security reinforces rather than challenges the degradation narrative. Thus, even a progressive critique like Barnett's (2001), which calls for reformulating environmental security in terms of human security and peace, accepts the conventional wisdom on the link between population, poverty and environmental degradation. On this point Barnett differentiates himself from environmental conflict theorists only to the extent that he believes overpopulation leads not to violence, but to famine, which reduces poor people's capacity to wage war.

Lonergan and colleagues in the Global Environmental Change and Human Security Project (GECHS) define human security more proactively than the UNDP, including the concepts of human, environmental and social rights. Moreover, they recognize the necessity of resistance: "[H]uman security will be achieved through challenging the structures and processes that contribute to insecurities" (Lonergan 1999b:29). Their analysis of the linkages between population, poverty and environmental degradation refreshingly acknowledges that the relationship is "complex,

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multi-dimensional, conditional, and, at least to date, indeterminate...poverty, and environmental degradation are historically, socially and politically constructed" (50). Neo-Malthusian assumptions, nevertheless, creep into the work, especially when it comes to policy recommendations. In a study of environmental degradation and population displacement, Lonergan states categorically, for example, that population growth is a threat to the environment and "it is imperative that birth rates are brought down" (Lonergan n.d.:33).

The notion of ecological security also seeks to broaden the environmental security framework. It not only moves beyond the notion of state sovereignty, but towards a biocentric rather than homocentric world view (Barnett 2001). "Ecological security requires a new cosmology," writes Mische. "The earth is like a single cell in the universe, and humans do not control the cell but are part of it. We will live or die as this single cell lives or dies" (Mische 1992:108). Such a cosmology is more suitable to describing the grand scheme of things than specific social and political relations which affect resource use; lumping all humans together, meanwhile, can lend itself to survivalist discourses of "too many people." Indeed, Mische points to the perils of population growth, and to how environmental degradation will lead to growing numbers of environmental refugees who will cause increased instability and strife within and between nations.

Neither the human security nor the ecological security approach necessarily challenge the degradation narrative. As we have seen, the narrative influences both narrow and broad, state and non-state centered interpretations of environmental security. It also reinforces, and is reinforced by, the racialized demographic representations made

by Kaplan et al, who have helped provide the dark side counterpoint to American universalism and its stewardship mystique. The concluding part of this chapter considers other related narratives of danger and scarcity in the environment and security field.

IV. THE EXTENDED FAMILY OF DEGRADING TROPES

Despite its central role in the environment and security literature, the degradation narrative does not operate alone as the sole dark filter through which the Third World is viewed. It is part of a larger, extended family of degrading tropes and narratives, some of which have been around for a long while and some of which are relatively new. As this section illustrates, the cumulative impact of these tropes, which include the dangerous rain forest, migrating microbes, the youth bulge, the hyper-fertile female and water wars, is to naturalize poverty and inequality and to obscure dynamics of power.

Dante's Rain Forest and Invasive Germs and Species

More than any other Third World landscape, the rain forest occupies a particularly romantic place in the Western imaginary. Slater argues that Amazonia and other rain forests are often represented in terms of Edenic narratives that consciously or unconsciously evoke the biblical Eden and in the process neglect the complex realities of specific people in specific places (Slater 1995). In recent years, the growth of eco-tourism has reinforced this vision through the marketing of Third World ecosystems as scarce and exotic Edenic scenes whose inhabitants are authentic 'primitives' (Bandy

1996).

But just as in fairy tales, the enchanted forest can also be dark and menacing, a jungle of creeping vines and snakes. This dual view of the tropical forest, which has roots in the colonial period (Arnold 1996), co-exists in some of the environment and security literature. For example, while on the one hand Robert Kaplan laments the destruction of the West African forest by overbreeding peasants, on the other he warns us that dense canopies of trees breed violence. He describes the Liberian rain forest as "a green prison with iron rain clouds" where "men tend to depend less on reason and more on suspicion." By weakening the civilizing influences of Islam and Christianity, this "forest culture" is more prone to violence (Kaplan 1996b:28-29).

The more common fear, however, is that the African rain forest is the source of dangerous microbes like AIDS and Ebola, part of a new set of "biological national security issues" that threaten the U.S. (Goldberg 1997:35). In his study of portraits of the Ebola virus, Zerner argues that in the mid to late 1990s, representations of the directionality of African forest invasions reversed. Once conceptualized as incursions into the rain forest, agricultural conversion, road-building, lumbering and development are now seen as exit routes out of the forest, "the first connections to the global highway of commerce and the spread of tropical diseases" (Zerner forthcoming:3). He links this view of "the viral forest on the move" to larger Western fears of globalization and especially of immigration, noting the use of rhetoric that "not only identifies illegal immigrants as carriers of exotic, dangerous micro-organisms, but identifies the immigrants themselves as pathogens" (33).

For some observers population growth is a major link in the viral chain. Security

scholar Dennis Pirages contends, for example, that population pressure is forcing migration into previously isolated rain forests in Africa and Latin America where many lethal microorganisms are waiting to strike. "This explains the periodic but brief appearances of killer viruses among people living on the fringes of rain forests who come in contact with forest animals...As the forests continue to fall before the ax and plow, viruses continue to migrate into human populations" (Pirages 1996:11).

Other analyses focus less on the rain forest as the source of danger, but still stress the role of population growth in fostering disease. Lester Brown and colleagues believe the rapid spread of AIDS in Africa is due to "demographic fatigue": worn down by population pressure, poor African governments simply cannot cope with such a public health crisis (Brown, Gardner and Halweil 1999). The U.S. National Intelligence Council (NIC) report on the global infectious disease threat identifies a wider range of causes, but also notes how population growth, urbanization and cross border movements will continue "to facilitate the transfer of pathogens among people and regions" (NIC 2000a:44-45). It concludes that infectious diseases are a national security threat, imperiling the U.S. civilian population and military forces, as well as impacting American interests abroad. In general, threats are seen to emanate from *outside* the U.S.; the report notes (overly) confidently, for example, that most emerging infectious diseases, including HIV/AIDS, originate "outside U.S. borders" (65). This view of disease as a foreign intrusion has long been an element of American thinking (Campbell 1998).

Similar to the linking of disease and migration are current representations of the biological invasion of foreign species. Subramaniam (2001) documents how in the U.S.

today, "the xenophobic rhetoric that surrounds immigrants is extended to plants and animals" as part of the cultural malaise and resurgence of nationalism associated with globalization. Foreign plant and animal species are typically described as alien, pervasive, destructive, aggressive, and hyper-reproducing. In regard to the latter, Subramaniam draws the parallel between classic stereotypes of over-fertile and over-sexualized immigrant women and rhetoric about the rapid reproduction of foreign plants, which includes fears about miscegenation.

The Youth Bulge and the Belly Bulge

Another lurking threat is the so-called 'youth bulge.' Concerns about the security implications of the large youth cohort in Third World populations reaches back to the Cold War (see Chapter Two), and it entered the environment and security field with hardly a critical eyebrow raised.[12] "The poorest and fastest growing countries in the world are characterized by bottom-heavy population profiles: they are nations of young people, the ones that yield the sad images of barefoot children with automatic rifles." So states a Carnegie Commission report on environmental quality and regional conflict (Kennedy 1998:36).

In the environment and security literature, the youth bulge essentially takes over where the degradation narrative leaves off. Once rural migrants reach the city, they are transformed into "underemployed, urbanized young men" who "are a particularly volatile group that can be easily mobilized for radical political action" (Homer-Dixon 1999:58). It is interesting how young women are completely missing from the picture.

The youth bulge is not only represented as predominantly male, but often

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predominantly Islamic (Hendrixson 2002). Samuel Huntington warns, for example, of the expansion of the youth cohort in Muslim countries which provides "recruits for fundamentalism, terrorism, insurgency and migration" (Huntington 1996:103). Drawing the link between population, environment and conflict, Anthony Zinni, Commander in Chief of the U.S. Central Command, warns that dramatically increasing population growth in the Arabian Gulf region is

> putting pressure on natural resources, especially water, and economic systems. This has resulted in instability, especially in countries experiencing this "youth bulge." Certain areas of this dynamic and volatile Central Region offer a fertile environment for extremists to recruit, train and conduct terrorist operations (Zinni 2000).

As Hendrixson notes, nowhere in the literature on the youth bulge is it portrayed positively. Young men do not create jobs, they only put pressure on the means of employment, and they are by nature prone to violence. This view of young men in the Third World has much in common with the alarmist "superpredator" literature on the proliferation of young criminal males in the U.S. (Hendrixson 2002).

And where are the young women of the youth bulge? In more recent population literature, they are the girls who need to be educated, empowered and given access to birth control in order to slow population growth. They are sexually active, but at least non-violent. However, with a few exceptions, young women, and women in general, are largely missing from the environment and security literature.

Robert Kaplan is one of those exceptions. The women of his imagination are almost all Orientalist stereotypes: Persian women have sensuality implanted in their genes, rural Indian women are "petite mahogany sculptures," the maids who clean his hotel in Baku are "ancient female automatons," and African women are mainly bare-

breasted and pregnant (1996b:15,19,164,184,359). More commonly in the literature,

women are represented obliquely through the proxy of population growth.

While the degradation narrative ignores women's productive roles in agriculture,

through "population growth" it stresses their reproductive role in the despoiling of the

environment: the fertility of poor, dark women renders the earth infertile in an inversion

of the Earth Mother myth, and for some, only family planning can save it. For example,

under the caption "FAMILY PLANNING CHANGES EVERYTHING," a Packard

Foundation-sponsored PLANet Campaign advertisement features a picture of a degraded

tropical forest on fire next to another picture of the same forest, now lush and green. The

ad then reads:

> Amazing as it may seem, providing people in developing nations
> access to family planning is a critical first step in saving much of the 40
> million acres of tropical rainforest being lost each year. Forests that are
> being cut down to create cropland to feed the world's ever-growing
> population...In places where family planning programs already provide
> voluntary contraception, health care, and sex education, most women are
> choosing small families. This, in turn, eases the intense pressure on the
> environment's natural resources (PLANet 2000).

"Population growth" is profoundly infused with race and gender, the ultimate

trope which masks what Lisa Richey calls the "more insidious, unspoken, and often-

denied undertones that link 'over-fecundity' with 'savagery,' 'backwardness,'

unconstrained sexuality and violence" (Richey 1999:313). These undertones, in turn,

have deep roots in the colonial encounter in which non-European women were

represented variously as exotic, oppressed, irrational, ignorant, and sex objects (de Groot

1991). They were also viewed as dangerous immoral temptations for white men living

in the tropics, posing the risk of racial mixing and miscegenation (Arnold 1996).

Controlling women's fertility then becomes the solution, not only for

environmental degradation, but for the violence which is its 'natural' outcome. Most often, this is put in the neutral language of calls for reducing population growth through more family planning and literacy programs for women, but occasionally a starker image of the exercise of biopower shows through. Thus, as journalist Jeffrey Goldberg watches the sterilization of a poor, naked Kenyan woman, he reflects on how U.S. aid for family planning can help stem the "biological crisis" of overpopulation in Africa. He expresses surprise that the patient is "seemingly oblivious to the fact that she is naked and that her reproductive tract is exposed to the world," oblivious to his own voyeurism and that it is he who is doing the exposing (Goldberg 1997:39).

Images of women's offspring are similarly uncharitable. In the words of Prins and Stamp, "each new baby in the poor world by its birth slashes at the forests and erodes the soils of its immediate environment, reducing its own chance of survival" (Prins and Stamp 1991:42).

Water Wars

The degradation narrative features less prominently in the literature on prospective resource wars, which argues that competition over economically valuable, increasingly scarce resources such as oil may cause nation states to go to war (e.g. Klare 2001). This "resource war" approach derives more from conventional geopolitical concerns, though in recent years neo-Malthusian assumptions about the nature of rising demand have generated a discursive linkage with environmental conflict. This is particularly true in the case of a renewable resource like water.

Proponents of the water war thesis argue that increased demand is making water scarce and heightening the risk that nations will engage in violent conflict over who

controls shared water resources. And for many, population growth is the main source of increased demand; wasteful water practices are typically presented as a secondary concern. "Any further increase in world population will produce a corresponding surge in the demand for water," Klare argues. He points to high levels of population growth in countries along the Nile River Basin as making the situation there "potentially explosive" (Klare 2001:143,156). The specter of water wars in fact has become a popular vehicle for raising alarm. "My fear is that we're headed for a period of water wars between nations," Klaus Topfer, head of the U.N. Environment Program (UNEP), stated. "Can we afford that, in a world where conflicts over natural resources and the numbers of environmental refugees are already growing?" (cited in Asmal 2000:3).

Interestingly, the water war thesis has received more critical scrutiny by environment and security scholars than the degradation narrative. A substantial body of critical literature has pointed out that despite the realities of water scarcities and tensions over shared water resources, nations, in fact, have not gone to war over it in the past and are unlikely to in the future. Instead, these tensions more often provide an opportunity for conflict resolution and international cooperation (e.g. Lonergan 2001, Wolf 1999). Moreover, in regions which face serious problems of water quality and quantity, such as the Horn of Africa and the Middle East, the problems are primarily political, economic and managerial, and not simply a question of population-induced scarcity (Allan and Nicol 1998, Allan 1996).[13]

Nevertheless, potential conflict over water, blamed primarily on population growth, remains a concern of the environment and security field.[14] Fears of water wars have a survivalist ring about them, and may, like previous survivalist discourses,

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reinforce the degradation narrative through the emphasis on population pressure as the primary threat.

This list of tropes related to the degradation narrative is by no means exhaustive, and no doubt others will emerge over time. What it points to is the need not only to identify and contest such stereotypes, but to analyze how they reinforce each other and contribute to the crude demography which renders the Third World 'other' a threat.

V. CONCLUSION

As we have seen in this chapter, the degradation narrative has wielded and continues to wield tremendous ideological power. With historical roots in the colonial era, it later became a salient feature of development thinking, a crisis narrative that justified Western interventions in the Third World in the form of rural development and population control. Embraced by many sustainable development theorists in the 1980s and 1990s, it was increasingly linked to migration concerns, especially the construction of 'environmental refugees.' Interacting with neo-Malthusian survivalist discourses, it was integrated uncritically into the project of rethinking security during the Cold War. In the post-Cold War period it became an element of the crude demography which helps legitimize American hegemony through the notion of stewardship. In the environment and security field, it operates as a hegemonic myth that draws seemingly diverse and conflicting interpretations together.

The ideological power of the degradation narrative lies largely its ongoing utility in the construction and production of the 'Other' as threat or target for Western intervention, its ability to shift the blame for poverty, environmental degradation and

violence to the Third World poor from the First World rich, and its capacity to naturalize social, economic, and political processes. Within the environment and security field more generally, Dalby warns that ecological metaphors concerning security risk reinforcing the power of ideological moves of naturalization. "If the social can be rendered natural then it is beyond political control. The realm of necessity is not the realm of freedom and political choice" (Dalby 1998a:294). After examining the environmental determinism implicit in both the water wars and population discourses, and the way they reinforce power inequalities and neoliberal 'solutions,' Lipshutz issues a call to 'denaturalize' such concepts and focus on the social dimensions of resource control (Lipshutz 1997).

Given the entrenched power of the degradation narrative and its relatives, this 'denaturalization' is not an easy process. It requires not only philosophical but empirical challenges to the prevailing wisdom. The next chapter challenges the most influential environmental conflict models, starting with Thomas Homer-Dixon's Project on Environment, Population and Security, as a necessary step toward an effective critique.

Endnotes to Chapter Three

[1]. See Jarosz (1996) for how the colonial administration blamed native shifting cultivation practices for deforestation in Madagascar, ignoring the role of commercial coffee production and logging concessions. Historically, unprecedented deforestation rates during the colonial period coincided with population stagnation, not growth. For a general discussion of the impact of colonialism on land degradation see Blaikie and Brookfield (1987).

[2]. Even when refugees resettle, they are frequently stereotyped as "exceptional resource degraders," whether the empirical evidence supports the claim or not (see Black 1998).

[3]. Security scholar Ken Conca told me that in the period around the end of the Cold War he attended a number of Peace Studies conferences. While they were left of center in terms of their criticism of political science, there was also a lot of acceptance of Garrett Hardin-like views of people as the problem and gloom and doom. He found that in the Peace Studies field, the end of the Cold War was converging with a troubling language about scarcity.

[4]. Interestingly, in his previous role as a foreign agricultural policy advisor with the Department of Agriculture, Brown had been a technological optimist, a staunch promoter of the Green Revolution and agribusiness investment (Brown 1970).

[5]. It is interesting to view the findings of Our Common Future in relation to the first United Nations Conference on the Environment, held in Stockholm in 1972. McCormick describes the conference as "the single most influential event in the evolution of the international environmental movement" (McCormick 1989:104). Despite its many achievements, Stockholm fostered the notion that underdevelopment and poverty were the most serious threats to the environments of poor countries (Thompson 2000), and not, for example, resource extraction or displacement of peasant agriculture by corporate forces. Our Common Future follows in this tradition.

[6]. The report was not without its critics. Chatterjee and Finger (1994) noted how it failed to take on the financiers and profit-makers of the arms race, the relationship of the military-industrial complex to industrial development in general, and the military's role in environmental destruction. Moreover, they argued, it is wrong to place political and environmental causes of conflict on the same level. The environment and security analogy "automatically leads to a resource, a risk, and ultimately to a crisis management approach, where the most efficient way to deal with the crisis will be a militaristic one, based on high-tech and hierarchy" (169). This is part of a larger process of transforming the global environmental crisis into global environmental management, which privileges Northern interests and successfully coopts environmental NGOs and movements through the New Age one-world model of politics (see also Lohmann 1990).

[7]. Lately, more critiques have emerged of the neo-Malthusian assumptions prevalent in the field. See Peluso and Watts (2001) and Haas (2002). Haas argues that the

attractiveness of doctrines of environmental conflict and resource scarcity "is not solely the nature of the arguments they make, but rather their affinity to the values and beliefs invoked by the person making the argument" (1).

[8]. For a further critique of Gore's environmentalism, see Luke (1999).

[9]. The novel was translated and published in the U.S. under the auspices of John Tanton, the founder and funder of the most powerful anti-immigrant organizations in the U.S. (Southern Poverty Law Center 2002).

[10]. For example, see Dalby (forthcoming 2002) for a refreshing critique of Kaplan's views.

[11]. See Mitchell (1995) for an astute critique of this image of Egypt.

[12]. Today the 'youth bulge' is the subject of more critical scholarly inquiry. See Urdal (2001).

[13]. For the Jordan catchment, Allan (1996) argues that "the analysis of the relationship between economic development and the use of water leads to the conclusion that a high policy priority must be the diversification of the economies, in other words the creation of new livelihoods which use water to greater economic effect. The successful implementation of such policies will stabilize the internal economy and society and will simultaneously enable the purchase of 'virtual water' on world markets in the form of food products" (76). For an interesting and in-depth discussion of the relationship between population growth and water scarcity, see Turton and Warner (2002).

[14]. The ECSP, for example, recently produced a booklet on the linkages between population and water, supported by USAID. While the foreword and first article are neo-Malthusian in tone, the others are more nuanced (ECSP 2002).

CHAPTER FOUR

Environmental Conflict:

Wrong Turns on the Causal Pathway?

"Inspiring work," "more solid than his predecessors," "right place, right time," "hit single too soon:" These were some of the comments about Thomas Homer-Dixon's work that were elicited by my interviews. Admirers and critics alike agreed that Homer-Dixon had put environmental conflict on the academic and policy maps, and that "the ferment around his work" had sparked the creation of new institutions, such as the CIA's Environmental Center. More than any other single individual, Thomas Homer-Dixon became **the** frame of reference for the environment and security field more generally and environmental conflict work more specifically. As he himself ruefully noted, he has been attacked so much precisely because his work was the starting point.

In this chapter I also take his work as the starting point, focusing on the models and case studies of his most widely known venture, the Project on Environment, Population and Security (EPS), a joint activity of the University of Toronto, the American Association for the Advancement of Science and the Canadian Center for Global Security. This project took place between 1994-1996 and was primarily funded by the Pew Charitable Trusts. Homer-Dixon also undertook two other projects on environmental conflict, Environmental Change and Acute Conflict (1990-1993) and Environmental Scarcities, State Capacity and Civil Violence (1994 on).[1] Although I do not focus on these directly in this chapter, their results have certainly influenced his other

work and are reflected in his summary book, <u>Environment, Scarcity and Violence</u> (1999), to which I refer in this chapter. (For a list of the publications of the three projects, see Appendix B.)

While there have been other critiques of Homer-Dixon's work, on which I draw in this chapter, the main debates have centered on flaws in his political science methodology, rather than the assumptions and evidence which undergird his analysis. Because the latter have escaped much critical attention until more recently, they have exerted undue influence on other environmental conflict models and continue to impact policy today. In this chapter I provide an in-depth critique of the Project on Environment, Population and Security, not because it is an easy straw man to attack, but on the contrary, because of the enormous staying power of many of its assumptions.

The chapter is organized into four parts. Part One provides a brief overview of the project's findings and methodology and the main criticisms of the latter. Part Two develops the elements of a critique, challenging the project's assumptions and evidence in regard to population growth, migration, the localization of blame, the role of the state, ethnicity, gender and the "ingenuity gap." Part Three examines related models developed by other institutions and scholars in the field, addressing to what extent they converge and diverge from those of Homer-Dixon, and Part Four offers some concluding remarks.

I. SPINNING THE WEB

In <u>Ecoviolence</u> Homer-Dixon and co-author Jessica Blitt lay out the central findings of the EPS project based on research on 15 countries (Homer-Dixon and Blitt 1998).[2] The project chose five areas for detailed case studies: Chiapas, Gaza, South

Africa, Pakistan and Rwanda. Case study selection was based on the occurrence of both environmental scarcity and conflict, and the method of "process tracing" was used to determine if and how the independent variable (environmental scarcity) was linked to the dependent variable (conflict). Homer-Dixon cites George and McKeown's definition of process tracing:

> The process of constructing an explanation is much like the construction of a web or network. The researcher assembles bits and piece of evidence into a pattern; whether a piece is to be changed or added depends on whether the change fits with what already has been constructed, and whether it strengthens the web's structure. Does the modification of the explanation create more new puzzles than it solves? If yes is the answer to these questions, the modification is rejected. Modifications that are consistent and produce smaller, more localized, and less frequent research puzzles are to be valued. The growth of the web orients the search for new pieces, just as the growth of a jig-saw puzzle guides the search for new pieces that will fit together with what is already assembled (George and McKeown 1985:31-32, cited in Homer-Dixon 1999:171).

Through process tracing, the EPS project derived a model for the relationship between environmental scarcity and conflict which has these key features:

1. In certain situations scarcities of renewable resources such as croplands, fresh water and forests can cause civil conflict and instability, even though on first inspection the scarcities do not appear to be a direct cause. This is because "environmental scarcity" generates powerful intermediate social effects, e.g. poverty, migrations, ethnic tensions and weak institutions, "that analysts often interpret as conflict's immediate causes" (Homer-Dixon and Blitt 1998:223).

2. While environmental scarcity above refers specifically to scarcities of renewable resources, the definition is then widened to include three factors: "the degradation and depletion of renewable resources, the increased demand for these

resources, and/or their inequitable distribution" (224). The increased demand for resources is mainly linked to population growth, so population growth in effect becomes the second factor, as illustrated in Figures 1 and 2 (see next page).

3. In conjunction with population growth, the degradation and depletion of renewable resources induce powerful groups to tighten their grip on them in a process called "resource capture." These groups often use this control to generate profits, while intensifying scarcity for poorer and weaker groups. (See Figure 1).

4. Combined with population growth, unequal resource access can force the migration of the poorest groups to ecologically vulnerable areas such as steep hillsides, tropical rain forests, areas susceptible to desertification, and low-quality urban land. The pressure of their numbers and their lack of knowledge and capital then cause "severe environmental scarcity and chronic poverty," a process termed "ecological marginalization" (225). (See Figure 2.)

5. Environmentally induced conflict can be avoided if societies adapt to scarcities by using resources more sustainably or acquiring them through international markets. The capacity to adapt, however, depends on whether or not there is "an ample supply of the social and technical ingenuity that produces solutions to scarcity" (226). The outlook is grim for many Southern countries under-endowed with efficient markets, research institutions and the like; moreover, environmental stress is likely to diminish their ability to create such institutions in the first place. The result is further impoverishment and migration.

6. Environmental scarcity can weaken the state by threatening "the delicate give-and-take relationship between state and society" (10), increasing the demands on public

Decrease in Quality
and Quantity of
Renewable Resources

Increased
Environmental
Scarcity

Population Growth

Unequal Resource
Access
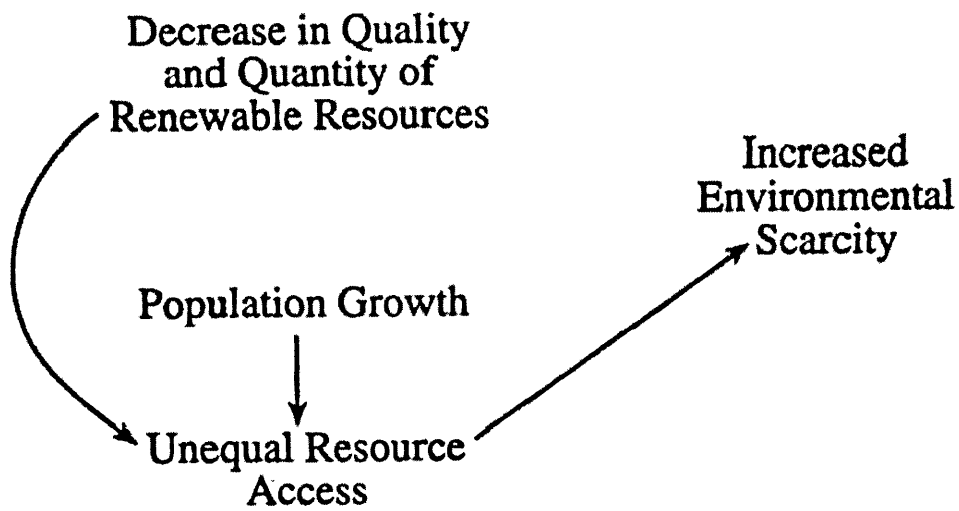
Figure 1: Resource Capture

Decrease in Quality
and Quantity of
Renewable Resources

Increased
Environmental
Scarcity

Population Growth

Unequal Resource
Access
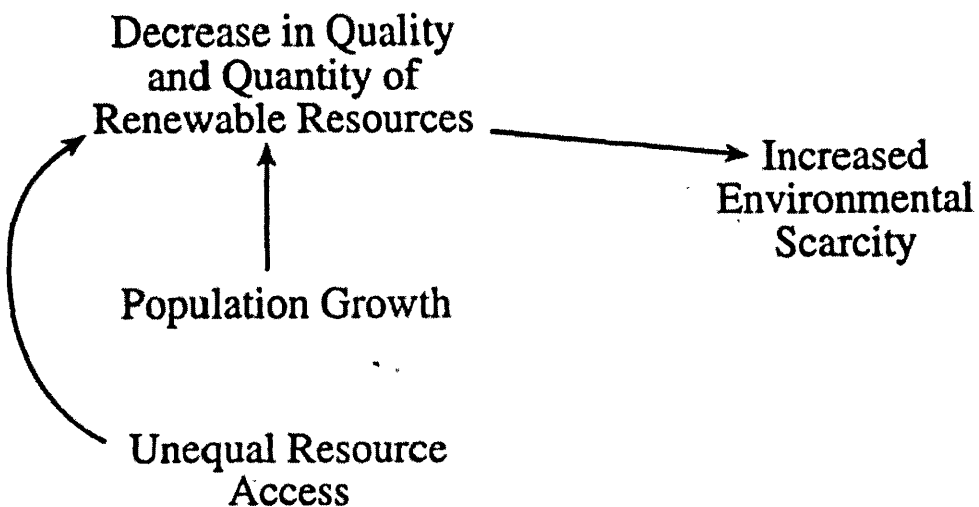
Figure 2: Ecological Marginalization

Source: Homer-Dixon 1999: 74

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institutions, encouraging predatory elite behavior, and reducing tax revenues. At the same time it can reinforce group identities based on ethnic, religious or class differences because "individuals identify with one another when they perceive they share similar hardships" (226). Increased competition between groups leads to social segmentation and reduced social trust. Ultimately, the weakening of the state "shifts the social balance of power in favor of challenger groups...and increases opportunities for violent collective action by these groups against the state" (227).

7. By contributing to migrations, economic decline, social segmentation and weakened states, environmental scarcity helps lead to violent "ethnic conflicts, insurgencies and coups d'etat" (227). These have serious consequences for the security interests of both developed and developing countries, triggering monetary crises, refugee flows, humanitarian disasters, and either the fragmentation or increased authoritarianism of states.

The EPS model of environmental conflict thus neatly completes the circle between environment and security. However, neat models rarely do justice to complex social realities; as Ronnie Lipschutz has aptly noted, "All arrows might be equal in flow charts, but not all have equal significance in everyday life" (Lipschutz 1997:46). There are a number of serious problems with the approach.

First and foremost is the weak definitional foundation upon which the model is built. As Fairhead notes, the concept of environmental scarcity conflates distinct processes -- the generation of renewable resource scarcities, environmental degradation, population growth, and the social distribution of resources -- into a single, over-arching term which is "tantamount to analytical obfuscation" (Fairhead 2001:217, also see Hauge

and Ellingsen 2001). Environmental degradation is confused with renewable resource scarcity (indeed, they are often presented as virtual synonyms) although there is no necessary link between the two. Land shortages, for example, can be an incentive to boost productivity through better agricultural techniques and land improvements (Fairhead 2001).

By adding the social distribution of resources into the definition of environmental scarcity, Homer-Dixon de facto creates a link to conflict, since political conflict often revolves around issues of resource control. This is the main tool by which he is able to force very disparate conflictual situations into his universalizing model, but the result is a model so inclusive as to be banal (Fairhead 2001). Gleditsch makes a similar point, noting how all resources are scarce "to some degree, at some times, or in some places," and that scarcity almost by necessity leads to conflict *of interest* (Gleditsch 2001:257). Levy notes that environmental factors interact with such a variety of social processes to generate violence that "there are no interesting mechanisms that are purely and discretely environmental" (Levy 1995:58).

In defense of their tripartite definition of scarcity, Homer-Dixon and colleagues state that in their research, problems of decreasing resource supply and rising demand were always "intimately entangled" with unequal resource distribution (Schwartz, Deligiannis and Homer Dixon 2001:276). While this may be the case, it is not a justification for a confusing definition; on the contrary, it calls for *disentangling* these elements in the interest of greater clarity. In the end, their argument relies on privileging the natural over the social. "The fundamental issue is one of scarcity of renewable resources," they argue, and therefore it is permissible to subsume the social sources of

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scarcity in the definition (276).[3]

Levy identifies another central flaw of the EPS project as the choice of case studies in which violent conflict and resource scarcity are simultaneously occurring. Homer-Dixon's rationale is that these cases can most effectively falsify the null hypothesis that the two factors are not causally related. However, as Levy points out, conflict over renewable resources is to be expected in developing countries since these resources are a major source of wealth: "Developing country elites fight over renewable resources for the same reason that Willy Sutton robbed banks -- that's where the money is" (Levy 1995:57). According to Levy, a better research strategy would be the comparison of countries with similar environmental problems but varying degrees of conflict:

> That would permit some precision in identifying the conditions under which environmental degradation generates violent conflict and when it does not, and for formulating useful policy advice on how to avoid violent outcomes. By instead taking aim at a null hypothesis that has virtually no advocates, researchers have lost the ability to say anything more than "the environment matters," something not seriously disputed before this work was undertaken (Levy 1995:57).

He also advises the use of "counterfactuals:" The question should be asked how a given case of scarcity might have had different outcomes if the political institutions involved were stronger or more democratic, on the lines of Singapore or Costa Rica, for example. However, he makes the point that to use counterfactuals effectively, one must have detailed empirical knowledge of those societies too, another reason Homer-Dixon should consider places where there is more variation in the operation of the variables he considers important (Homer-Dixon, Levy, Porter and Goldstone 1996:59).

Homer-Dixon has vigorously defended his research methods, but in so doing has

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revealed several key biases. He admits his colleagues and he deviate from standard social science inquiry in the way they go about looking at the relationship between the 'dependent variable' (conflict) and the 'hypothesized independent variable' (environmental scarcity). They are not interested, he writes, "in the whole range of factors that currently cause changes in the value of the dependent variable (conflict)," instead wanting to show the particular impact of one independent variable (environmental scarcity). This is supposed to justify the selection of cases which specifically accentuate the variance of the independent variable (Homer-Dixon 1995b:2).

This approach easily leads to an over-emphasis on scarcity causing conflict because the other independent variables are a priori of secondary importance. Moreover, the methodological muddle of the term "environmental scarcity" confuses matters further, since as previously noted, the term conflates distinct social and ecological processes so there really is no 'one' variable he is testing.

The process tracing methodology is also problematic since it can encourage deterministic patterning: internal consistency is stressed over more open-ended exploration, questioning and specificity. Indeed, according to George and McKeown (1985), modifications of the explanation are rejected if they create more new puzzles than they solve. But these very puzzles could be a warning signal that the chain of causal reasoning has weak links or that no single pattern applies.

The models Homer-Dixon produces on the basis of his process tracing have similar shortcomings to over-generalized and closed ecological system dynamic models. In his critique of such a model for the impact of nomadic pastoralists on the Sahelian environment, Taylor (1992) points to a number of problems, including the choice of

what are considered internal or external factors in the particular ecology and how agents are categorized and specified. An important question is "whether to emphasize the contingency, even idiosyncracy, of agents' actions or to generalize about agents despite differences in their situations. If the particularity is discounted, do the outcomes come to appear simply determined?" (119).[4]

In his summary book Environment, Scarcity and Violence, Homer-Dixon (1999) shows himself more open to other methodological approaches, though mainly within the bounds of political science. He writes that his methods made sense in the early stages of the investigation, but now based on this work, researchers can derive "more sophisticated hypotheses" using a broader range of methodologies, such as cross-national statistical and counterfactual analyses (182). He is particularly interested in cases where violence does not occur even though environmental scarcities are a serious problem.

Nevertheless, he continues to stand behind the EPS project's case studies and they still greatly inform his work, comprising the main body of Ecoviolence (Homer-Dixon and Blitt 1998) and serving as supporting evidence in Environment, Scarcity and Violence. While it is true that the case studies are more nuanced and attentive to context than the model, the next section shows how both often generate a misleading picture of the causes of environmental degradation and violence.

II. ASSUMPTION TRACING

The deepest flaws of the EPS project include not only methodology but the assumptions about the Third World on which it is premised. In a sense the project is strangely antiquated, insulated from research in the other social sciences which challenge

the dominant Western narratives of development. It is sophisticated in form, but not in substance. A prominent peace researcher remarked to me that the approach is reminiscent of U.S. foreign policy analysis during the Cold War, when information about the Soviet Union was made to conform to a prescribed vision of the Evil Empire. While this may be unduly harsh, an examination of the project's central assumptions reveal serious limitations.

The Ghost of Malthus

Homer-Dixon claims he is not a neo-Malthusian in the sense that he does not accept that "finite natural resources place strict limits on the growth of human population and consumption" (Homer-Dixon 1999:28). He points out how technological and institutional change can boost productivity and induce environmental improvements, and he is critical of the apocalyptic vision of "arch-pessimists" like Paul Ehrlich who believe that humans have already outstripped the earth's resources (28).

Despite these disclaimers, population growth is the single largest causal factor of environmental scarcity in both his project's model and case studies. It figures prominently throughout his writings, though less so in his most recent book The Ingenuity Gap (2000) (see subsection on the Ingenuity Gap below).

The negative role of population growth is fundamental to the very definition of environmental scarcity. As mentioned previously, it becomes a virtual synonym with the increased demand for resources, which is one of the three components of environmental scarcity. It is central to the processes of 'resource capture' and 'ecological marginalization.'

This automatic equation of population growth with increased resource demand is

incorrect. Not only does it not necessarily follow that if there are more people, they will consume more -- per capita consumption could fall for a variety of reasons -- but it may be that the increased resource consumption has little to do with demographic factors but instead with increased demand in external markets for a particular product, e.g. teak for Scandinavian style furniture. (I will return to this point later.)

The relationship of *depopulation* with environmental degradation does not figure in the EPS model at all. In Brazil, for example, many areas depopulated by poor peasants because of their lack of access to land and agricultural inputs have gone over to ecologically damaging extensive cattle raising, industrial monoculture and logging (Mello 1997). Similarly, in Mexico the exodus of peasants to urban areas has led to the loss of valuable micro-habitats and crop genetic diversity previously sustained by their labor (Boyce 1996; Garcia-Barrios and Garcia-Barrios 1990). In Africa low population densities and dispersed settlement patterns have been identified as important factors impeding the development of agriculture (Turner et al 1993). In general, as Templeton and Scherr observe, decreases in population density can lead not only to declines in cropping frequency, but "to cessation of labor-intensive methods of replenishing soil fertility, to neglect, abandonment or destruction of terraced landscapes and to soil erosion, downstream siltation and other forms of degradation" (Templeton and Scherr 1999:906).

While in Environment, Scarcity and Violence, Homer-Dixon acknowledges the possibility that population growth may in certain cases help spur agricultural innovation and intensification, he is largely pessimistic, remarking, for example, that even under the most favorable conditions, countries in Africa and elsewhere with high population

growth rates will not be able to boost yields sufficiently to keep pace with population growth (Homer-Dixon 1999: 34). This contradicts field research which suggests the situation is considerably more complex and context-specific. For example, Tiffen, Mortimore and Gichuki's study of Machakos District in Kenya found that increasing population densities combined with sound agricultural practices and market access led to boosts in agricultural productivity and environmental improvement (Tiffen, Mortimore and Gichuki 1994; also see Turner et al 1993). While population growth may decrease the size of landholdings, it can also expand the family labor supply, encouraging more labor-intensive cultivation and conservation techniques. Thus, declining landholdings in Rwanda are associated with more investments in soil conservation and greater managed tree densities per unit of land (Templeton and Scherr 1999).

In their research in West Africa, Fairhead and Leach document how population increase can lead to greater rather than less forest cover. Farming practices such as gardening and mounding can alter soils in ways that encourage afforestation, while village settlements are associated with the intentional creation of forest "islands" in the savannah as a source of forest products, a means of defense, and a location for cultural activities. Farmers also plant and transplant trees in fields and fallows (Leach and Fairhead 2000, see also Fairhead and Leach 1996,1998).

Fairhead and Leach caution, however, that one should not simply trade neo-Malthusian assumptions for neo-Boserupian ones. Just as there is no iron law that population growth leads to environmental degradation, nor is it axiomatic that population growth automatically spurs agricultural innovation and environmental improvement. "By framing the issue primarily in terms of relationships between aggregate populations, an

aggregate "environment" or resource set, and technology," they write, "both neo-Malthusian and neo-Boserupian perspectives exclude crucial questions relating to social and ecological specificity and history" (Leach and Fairhead 2000:18).

In the end, Homer-Dixon blames population growth disproportionately for environmental degradation, poverty, migration and ultimately political instability. Thus, he cites population growth as a major cause of the rise of Sendero Luminoso in Peru, violent unrest in Chiapas and the New People's Army (NPA) insurgency in the Philippines (Homer-Dixon 1999:18,23,78). He also fears the effects of the "youth bulge," the fact that the age structure in most developing countries is heavily weighted toward the young (see previous chapter).

Around the planet, Homer-Dixon claims:

> Population growth and unequal access to good land force huge numbers of rural people onto marginal lands. There, they cause environmental damage and become chronically poor. Eventually, they may be the source of persistent upheaval, or they may migrate yet again, helping to stimulate ethnic conflicts or urban unrest elsewhere (155).

Thus, like so many environment and security scholars, he subscribes to the degradation narrative, to which he gives the name "ecological marginalization."

Ecological Marginalization and the Localization of Blame

Homer-Dixon's acceptance of the degradation narrative leads to a neglect of larger economic and political forces that profoundly affect 'local' environments and conflicts. In a period of rapid global economic integration, the model is surprisingly insular in scope. It is essentially a closed system in which internal stresses may generate movement outward, mainly through mass migration, but the outside is rarely seen to be

pressing in.

Yet in reality there is no distinct boundary between the inside and the outside, or between the local, regional, national and global; they are linked through complex patterns of trade, investment, and foreign policy imperatives. Renewable and non-renewable resources alike have long been the traditional exports of the South. This "effective demand" from elsewhere may drive environmental degradation much more than local poverty and population growth (Fairhead 2001). Largely missing from Homer-Dixon's model is the crucial role of extractive industries -- mining, timber, agribusiness, etc. -- in the depletion and degradation of local natural resources.

Homer-Dixon is not alone in these omissions. As Conca remarks, the environmental security framework in general focuses on the "geographic location of visible symptoms rather than the social location of underlying causes" (Conca 1998:43). In the same vein, Dalby draws attention to how the demands of rich urban areas in the North for the resources of the South create a "'shadow economy' of degradation," which is often ignored in the literature (Dalby 1999).[5]

Homer-Dixon depicts ecological marginalization as a process by which unequal resource access and population growth force the migration of the poorest groups to ecologically vulnerable areas such as steep hillsides and tropical rain forests, which they then proceed to degrade. There are two problems here. First is the assumption that population growth and unequal resource access have equal weight as the 'push factors' causing people to migrate to such areas. Second is the failure to fully articulate the range of actors responsible for "unequal resource access."

For example, an extensive study of deforestation by the United Nations Research

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Institute for Social Development notes that while many observers blame deforestation on forest clearing by poor migrants, they ignore the larger forces attracting or pushing these migrants into forest areas, such as the expansion of large-scale commercial farming, ranching, logging and mining. "To blame poor migrants for destroying the forest is like blaming poor conscripts for the ravages of war" (Barraclough and Ghimire 1990:130). The study found an absence of any close correspondence between deforestation rates and rates of either total or agricultural population growth.

Homer-Dixon uses deforestation in the Philippines as a classic example of ecological marginalization. Unequal land access and population growth push poor unemployed peasants into ecologically vulnerable uplands where their slash and burn farming and small-scale logging destroy the environment. What Homer-Dixon leaves out is that under the Marcos dictatorship fewer than 200 wealthy individuals controlled a large fraction of the country's forests (Boyce 1993); during that period the country's forest reserves dwindled from 34.6 million acres to only 5.4 million (Jones 1986). The main culprit was not population growth -- one study found zero correlation between population growth and rates of deforestation in the country's provinces (Kummer 1992) -- but rather the illegal logging concessions Marcos gave to relatives and political friends, as well as his agricultural policies which heightened rural inequalities.

To the extent that poor peasants have degraded the upland environment in the Philippines, one needs to look more closely at the dynamics involved. Settlers have moved into the highlands on already existing logging roads. Although they occupy nominally public land, many pay rent to wealthy private landlords who use the money to pay 'taxes' to local officials so they can eventually lay claim to the land. As Boyce notes:

> Although upland farmers often do contribute to deforestation, it is misleading to cast them as the main villains...what distinguishes upland farmers from other agents of deforestation -- loggers, government officials, absentee landlords, and international firms and institutions -- is that the upland farmers are among the principal <u>victims</u> of the deforestation process. Not coincidentally, they are also the poorest (Boyce 1993:238).

Also missing from Homer-Dixon's picture of the Philippines and elsewhere are the consumers of the extracted products. For example, the main cause of deforestation in developing countries is demand for wood and paper, and nearly half that wood and three-quarters of that paper are used in industrialized nations (UNDP 1998). The failure to link the consumption patterns of Northern countries and Southern elites to 'local' land uses is in fact a major blind spot in Homer-Dixon's approach. Another is the lack of adequate attention to the role of price fluctuations on the international market in determining resource supply and demand. It is outside the scope of this chapter to do a detailed rendering of the international political economy of trade and finance, but suffice it to say, it has profound effects on resource use.

In one instance when Homer-Dixon does specifically refer to multinational corporate interests, the conclusion he reaches twists the concept of environmental scarcity and effectively puts the onus back on the local people. He notes how multinational extraction of oil in Nigeria's Ogoniland and copper on the island of Bougainville has polluted those regions.[6] This pollution magically becomes "environmental scarcity," even though it was the abundance of resources which attracted foreign firms to both areas in the first place (Homer-Dixon 1999:147-148).

He then describes violent insurgencies in Ogoniland and Bougainville as examples of "group-identity and relative deprivation motivations." He writes:

If the historical identity of a clearly defined social group is strongly linked to a particular set of natural resources or a particular pattern of resource use, degradation or depletion of that resource can accentuate a feeling of relative deprivation. Members of the group can come to feel that they are being denied their rightful access to resources that are key to their self-definition as a group. This relative deprivation boosts grievances that may eventually be expressed through aggressive assertion of a group identity (Homer-Dixon 1999:147-8).

That local people bonded together to defend their land and livelihoods hardly seems a special case of group identity. In Ogoniland, in fact, it was the Nigerian military who displayed the most "aggressive assertion of a group identity" in their brutal campaign to protect the interests of Shell Oil. Why, one has to ask, does Homer-Dixon focus on the violence of local acts of resistance, and not on the much larger violence of state and corporate enforcers?

Sometimes the problem is not only what is *missing* from the picture, but the 'facts' which comprise the picture itself. The case study of Chiapas strongly emphasizes the role of deforestation and land degradation, particularly soil erosion, in the creation of environmental scarcity and conflict in the region. The authors acknowledge that there has been "no credible long-term study of soil erosion in Chiapas," but nevertheless believe that "by piecing together available data and anecdotal evidence, we can clarify the story of supply-induced scarcities of cropland in the state" (Howard and Homer-Dixon 1998:32). "Speculate" would be a far better word than "clarify" in this instance.

They use three sources of data to make their case. First, is the World Map of the Status of Human-Induced Soil Degradation published by UNEP and the International Soil Reference Center in the Netherlands, in which the data for specific regions are highly aggregated. Nevertheless, there is provisional soil degradation information for Chiapas which indicates moderate losses in a number of locations. The accuracy of the

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data is questionable, however, since there have been no credible long-term studies of soil erosion in the region. According to Lindert, the World Map project in general is seriously flawed because it attempts to measure changes over time in the absence of data over time, presents a set of predictions rather than a real census of soil conditions on nonexperimental farms, and "proceeds from its own preconception that all land degradation is human induced" (Lindert 2000:22). As Lindert notes, "If we don't know with any real degree of certainty when the soil changed, or even whether it changed, how can we know why it changed" (20).[7]

Howard and Homer-Dixon (1998) then hypothesize on the basis of a 1975 study of farming techniques and soil degradation in the Central Highlands of Chiapas that conditions "have probably worsened" since the population has grown, thereby leading to a shorter fallow period in swidden agriculture (33). They assume that this process is also being replicated in the colonization of land elsewhere. The evidence here, needless to say, is speculative. They then project the extent of soil erosion in Chiapas on the basis of a general model of the economic costs of erosion developed by David Pimentel and colleagues for a temperate ecosystem. They insert indicators for rainfall, soil depth, slope, etc. for a *tropical* and a more temperate zone in Chiapas into Pimentel's model and come up with estimates of the erosion rate, yield loss and replacement costs. Given the vast differences between tropical and temperate zones, and the variation in temperate zones themselves, this is a dubious exercise. The use of such models is questionable in general given their oversimplification of interactive variables. Even soil erosion studies done *in situ* are fraught with errors (Stocking 1996), and Howard and Homer-Dixon's approach is many more steps removed from the actual landscapes they seek to analyze.[8]

Lindert questions the overall emphasis placed on erosion as the main cause of land degradation. Concerns about erosion have a more dramatic appeal, he argues, and have greater implications for social intervention, yet soil nutrient imbalances due to intensive cropping and inadequate fertilization may in fact be the larger problem (Lindert 2000).

Many models and data on deforestation are similarly flawed. In their study of six West African nations, Fairhead and Leach found that the extent of deforestation had been exaggerated in each, in part due to lack of attention to historical evidence and the resulting assumption that at the beginning of the 20th century, West African forests existed in a state of pristine equilibrium, essentially undisturbed by human use (Fairhead and Leach 1998). Moreover, in the absence of other data, many analyses of forest change have utilized a model which links population increase to land clearance, and hence vegetation change. As a result, "neo-Malthusian assumptions about local population-forest relations are thus embedded in the forest statistics themselves" (Leach and Fairhead 2000:24). In the case of the Himalayan region, Thompson, Warburton and Hatley (1986) found that the deforestation data were woefully defective and contradictory, based on "premature quantification, excessive abstraction and overgeneralization" (4). At the very least, such findings indicate that the statistics which undergird degradation narratives should be carefully interrogated, and that a healthy dose of skepticism is in order.

In the Chiapas case, the focus on population pressure and soil erosion ultimately reinforces the *naturalization* of a social conflict. It is not as if Howard and Homer-Dixon ignore the social causes; on the contrary, they write at length about the history of

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class and race relations in the region and the role of the Mexican state. But in their conclusion they cite "a rapidly growing peasant population" as the first among a "particularly explosive combination of factors" leading to the Zapatista rebellion (Howard and Homer Dixon 1998:54). A contrasting view is presented by Bobrow-Strain (2001), who argues that land conflicts in the area are not a result of "too many people competing for too little land." Rather,

> They arise from the confluence of national and economic reforms, changes in international commodity markets, and local histories of violence and insecurity that reduce *both* ranchers and peasants' capacity to use land intensively and effectively. In this sense, the actual scarcity in Chiapas is not tied to the environment or even land distribution but rather to politically charged forces that push producers toward less effective production (157).[9]

In the case of Gaza, Kelly and Homer-Dixon similarly over-emphasize Palestinian population growth and water scarcity in the generation of conflict. "Rapid population growth and intense agricultural activity in a region of scarce resources have combined with Israel's policies throughout the occupation to produce a potentially volatile political environment in Gaza," they write (Kelly and Homer-Dixon 1998:99). Yet it is not a question of "combining with" here; as the authors themselves document, the Palestinian population's lack of access to water and other productive resources is directly due to Israeli policies. Israeli policies should be a main subject of the sentence, and of serious analysis of conflict in the region.

Exclusion and Enclosure

One of the most fundamental problems with Homer-Dixon's approach is the acceptance of exclusion and enclosure as a given state of affairs, understating the role of

the violent processes that lead to them. His case study of South Africa, co-authored with Percival, portrays the bantustans as virtual 'Malthustans,'[10] where overpopulation, depleted resources and unequal resource access lead to ecological marginalization and then to migration to marginal urban areas where growing black populations in limited areas once more wreak havoc on the environment. The resulting environmental scarcity ostensibly escalates grievances, intensifies group divisions, and weakens institutions, fuelling violence which potentially may lock South Africa "into a deadly spiral of conflict" (Percival and Homer-Dixon 1998a:139).

But why are people made to subsist in limited, marginal areas, whether rural or urban? Why and how are they enclosed? Might the enduring violent legacy of apartheid have more to do with present political unrest than the fact that black people are cutting down trees?

A related issue is why people who are excluded and enclosed lack opportunities elsewhere. In the case studies there is little emphasis placed on the possibility of concrete economic and political changes which would provide people with the ability to diversify their livelihoods and/or reduce pressure on the natural resource base. The Chiapas case study does recognize that peasants suffering from acute land scarcity have only limited economic alternatives because of structural adjustments in the 1980s which reduced labor absorption in key industries and the spread of labor-displacing agricultural technologies on large estates (Howard and Homer-Dixon 1998). Yet peasant population growth still figures much more prominently in the analysis than this lack of an economic outlet due to state fiscal and agrarian policies.

Similarly, it is only on the last pages of the South Africa study that the authors

briefly sketch alternatives (economic growth, job creation, agricultural extension services, etc.) to the grim scarcity scenario they have laid out. Generally, in the case studies the necessity of, and prospects, for market development and industrialization are underplayed because in the absence of these possibilities, the neo-Malthusian scarcity argument appears more convincing. It also appears more convincing when migration is portrayed in a predominantly negative light.

Migration: Menace or Mitigation?

Aside from a few provisos that migration is not always a negative phenomenon (e.g. Homer-Dixon 1999:142), the EPS model, like the degradation narrative, is premised on the idea that migration is mainly demographically and environmentally induced, and that it often generates conflict as well as environmental degradation in the receiving area. "Environmental scarcity is, without doubt, a significant cause of today's unprecedented levels of internal and international migration around the world," Homer-Dixon writes confidently (95).

Doubt, however, is in order. The causes of migration are extremely complex and context-specific, and moreover, there is little evidence to support the view that demographic pressure is at the root of many population movements (Suhrke 1997). Moreover, migration from rural areas is often not a linear phenomenon or a rejection of rural livelihoods. Instead, it can be a vital part of sustaining them.

In their study of Vietnam, Locke, Adger and Kelly (2000) point out how internal migration is frequently circular and seasonal, with migrants returning to the rural areas at harvest time. Moreover, their remittances from urban jobs often help fund investments

in agricultural intensification, children's education, etc., enhancing the ecological and social resilience of the household. Black (1998) notes similar processes in the Sahel, where migration is less a response to environmental decline than a strategy of income diversification, with remittances playing a major role in household and regional economies.

The relationship between migration and conflict also does not fit well into a simple model. Suhrke challenges Homer-Dixon's notion that migrants are major instigators of urban unrest and ethnic conflict. Migration from rural areas is only one cause of urban growth; natural increase and urban-to-urban migration are also significant factors. Moreover, it is difficult to isolate growth as the cause of urban violence, and the phenomenon of urban violence itself is often over-exaggerated. A number of micro-studies now dispute the "the presumed pathology of megacities in the Third World," pointing to the functionality of many large urban areas (Suhrke 1997).

Homer-Dixon uses Bangladeshi migration to Assam as a classic example of population pressure-induced migration generating ethnic conflict (Homer-Dixon 1994,1999). Suhrke argues, however, that the conflict in the 1970s was largely due to the Indian central government aligning itself with the immigrants against the local Assamese:

> The peculiarly competitive structure of Indian politics in this period turned the illegal Bangladeshi migrants into valuable 'vote banks' for the all-India Congress party, thereby threatening the local political party. The locals responded by forming a nativist movement which in a complicated but related dynamic, led to large-scale violence (Suhrke 1997:264).

The Congress Party also made it easy for immigrants to settle by providing ration cards and access to land, thus acting as a powerful "pull factor."[11]

While Homer-Dixon acknowledges that these political developments are part of the "contextual factors" which shape migration and conflict dynamics in the region, he emphasizes land scarcity arising from population growth as the key driver. But as Black notes, "in conflict, as much as in migration, it is difficult or impossible to isolate particular causes outside the broader context within which these processes develop" (Black 1998:35). "Context" is not background; it is the very heart of the matter.

Under-specification

Overall, the EPS project's treatment of rural poverty, population growth, environmental change and migration suffers from under-specification. Emerging from an IR/security framework, the model takes too little notice of other social science research in anthropology, geography and development studies that looks more closely at the dynamics of resource use and distribution from the household level on up.[12] The local is not adequately differentiated, nor the global articulated. The poor, when they are differentiated at all, are done so mainly on the basis of ethnicity and religion.

Gender, for example, is not used as a category of analysis, a lacuna that has been noted by a former member of Homer-Dixon's team (Percival 1997). Yet despite lack of explicit attention to gender, certain views of women are implicit in the model, particularly given the central and negative role it ascribes to population growth. Subsumed into the analytic frame of population pressure, women through their fertility become the breeders of environmental destruction, poverty and violence.[13] They are the invisible heart of environmental scarcity, made visible only when policies to ease "population growth-induced scarcity", such as "family planning and literacy campaigns"

(Homer-Dixon 1994:16), are put forward.

Important questions about gender are not asked, much less answered. What are women's property rights, labor obligations, and roles in the management of environmental resources? Is there differential access to resources within the household? How have structural adjustment and other macro-economic policies affected women's health, workloads and status relative to male family members? Where are investments being made: in basic food production, where rural women most often work, or in export agriculture? If men must migrate to earn cash or to join militaries, how do women cope with the labor requirements needed to sustain food production and maintain infrastructure? How does environmental change affect gender relations?[14] And how do all these issues relate to women -- and men's -- reproductive strategies?

Case studies in Africa, for example, have shown how gender dynamics can have an important effect on agricultural growth. "Increasingly, day-to-day decisions about all facets of agriculture are being made by females, in most cases under conditions in which access to land is invested in males," write Hyden, Kates and Turner. "This contradiction is one that must be resolved adequately...if agriculture is not to stagnate" (Turner et al 1993:418). Recent literature on women and land rights points to the critical role of land ownership in providing women with the political clout and economic security for real 'empowerment' to take place within the household, community and society at large (Agarwal 1994, Deere and Leon 2001).

Gender analysis also opens a window through which to view potential *solutions* to the problems of resource degradation, maldistribution and constraints on agricultural growth. Unfortunately, many current land redistribution and community-based natural

resource management schemes have widened the gender gap rather than narrowed it because they have ignored power differences within the household, community and larger political structures. According to Indian economist Bina Agarwal, rethinking communities from a gender perspective would have a number of advantages:

> Conventionally treated as aggregates of households (at best with class/race/caste differences), communities, if recognized as gendered networks of individuals, could become spaces for creating institutions based on identities derived not only (or even) from household membership, but from socioeconomic need and gender. The examples of communal management of land by women are cases in point. In fact, a gendered perspective on institutions for the collective management of local resources -- land, water, forests -- would provide a promising new focus for development analysis and policy (Agarwal 1997:1379).

The EPS project also fails to differentiate types of rural poverty and their relationship to environmental change. Criticizing the degradation narrative in general, Reardon and Vosti argue that poverty cannot be treated as a single concept, and that assets must be broken down into specific categories. When households are "investment poor," lacking the cash and human resources to invest in maintenance or enhancement of the natural resource base, then environmental degradation is more likely to occur. However, there are many different reasons for investment poverty, and analyses need to be time and site-specific. Moreover, the precise nature of the environmental change in question must itself be specified (Reardon and Vosti 1995).

The Wind-Up State

Homer-Dixon's view of the state is also under-specified as well as oddly old-fashioned. Before the onset of environmental scarcity, the state is essentially presented as a unitary actor, engaged in a "delicate give and take relationship" with society, and

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delinked from the larger international context of regional and superpower rivalries. But enter environmental scarcity like a *deus ex machina*, and the state becomes the agent of whomever can get their hands first on the turn-key and springs into a flurry of largely destructive activity.

Several points need making here. First, whether in times of resource scarcity or abundance, most states have always been arenas of contention between groups making competing claims; the state may be unitary in form but seldom in substance. Secondly, the "delicate give and take relationship" between state and society may have existed somewhere under a benevolent monarch, or perhaps under the most enlightened social democracies, but otherwise the relationship has long been fraught with conflict, frequently brutal and violent. Thirdly, the state itself, through state-owned or aided enterprises, parastatal institutions such as marketing boards, conservation policies, contract awards, fiscal policies, etc., has often played a major role in managing, extracting and profiting from natural resources.

A pertinent example is the case of development projects. In describing the process of resource capture, Homer-Dixon has noted that agricultural shortfalls due to population pressure and land degradation can induce states to launch large development schemes, such as dams for irrigation (Homer-Dixon and Percival 1996:35). The benefits of these schemes are then captured by the rich, potentially leading to conflict.

However, the undertaking of a large development project often has much less to do with agricultural shortfalls than with the links between foreign donors/companies and domestic elites who stand to gain from lucrative procurement and construction contracts awarded to them because of their *prior* cozy relationship with government officials. In

this sense, too, the choice of technology -- whether it is environmentally appropriate and more conducive to control by small farmers, or large, expensive and even harmful -- usually has less to with the actual shortfalls than with who has the power to do the choosing. (See, for example, the case of a World Bank deep tubewell project in Bangladesh in Hartmann and Boyce 1983; also Fairhead 2001).

Homer-Dixon believes that in the absence of adequate adaptation, environmental scarcity weakens states, though a case can be made for the opposite scenario. The client state could potentially use resource scarcities to leverage more foreign assistance, and with this assistance secure more domestic clients and create new bureaucracies for aid projects, yet another avenue of patronage. In fact, one could argue that in recent years declining foreign assistance, high levels of debt, unfavorable terms of trade and financial austerity measures -- not shortages of renewable resources -- are creating the real 'scarcity' that weakens states.

Richards notes how African patrimonial systems of governance were strengthened in the Cold War period when leaders could use their geopolitical position to bargain for increased aid resources from the West and the Soviet Union. According to him,

> Patrimonialism in the 1990s faces a double crisis. World recession has reduced prices of many raw materials. Countries like Sierra Leone have also seen the exhaustion of some of their best sources of minerals. Meanwhile the ending of the Cold War caused sources of aid money to dry up. There is less money around to maintain the crumbling facade of the 'official state'(Richards 1996:36).

Yet even the weak state finds ways to cope in this new era. Reno describes the key mechanisms by which weak African states have preserved their power. With the end of Cold War superpower support, weak states are re-working their foreign ties,

especially clandestine commercial ones. In some cases, they are using foreign firms such as the South Africa-based Executive Outcomes to perform important functions of state security; states also sell off national resources to foreign firms since "from a weak state ruler's perspective, it is better to have important state assets fall into the hands of reliable foreigners than to see them removed from his control entirely" (Reno 1997:172). This suits creditors as well, since it meets their demands for revenue generation, and international development agencies are pleased with the resulting 'stability.' A far more interesting question to ask than "Is environmental scarcity weakening the state?" would be how these post-Cold War relations affect the reconfiguration of the state, patterns of resource exploitation, and the nature of conflict and security.

For example, recent research on the nature of contemporary civil wars points to the primacy of the economic interests of the perpetrators. "To paraphrase Carl von Clausewitz," David Keen writes, "war has increasingly become the continuation of economics by other means. War is not simply a breakdown in a particular system, but a way of creating an alternative system of profit, power and even protection" (Keen 1998:11, see also Reno 2000). A recent study of civil wars by Paul Collier corroborates this point. He finds that the presense (not scarcity) of primary commodity exports that are easily lootable substantially increases the risks of civil conflict (Collier 2000). De Soysa (2000) and Fairhead (2001) similarly contend that an abundance of mineral wealth is positively and significantly related to armed conflict, and not scarcity of renewable resources.

War economies meanwhile are intrinsically linked with current processes of economic globalization and neoliberalism. Duffield notes how the erosion of the state's

regulatory authority and public welfare functions under neoliberalism help spur market deregulation and declines in the rule of law and protection of customary rights. This allows warring parties to engage in resource extraction and transborder economic and arms transactions with greater impunity. Warring parties meanwhile are closely linked to both legal and criminal globalized trade networks: "Today's so-called warlords or failed states may act locally, but to survive they have to think globally" (Duffield 2000:84). Duffield disputes the idea that conflict arises from the "development malaise" of poverty and scarcity; rather war economies often employ immiseration and violent population displacement "as an essential precondition of asset realization" (81).[15]

In terms of the state and ethnicity, Homer-Dixon maintains that environmental scarcity can lead to a kind of localized ethnic and identity politics that causes social fragmentation and more opportunity for powerful groups to seize control of the state. Several observations are warranted here. As Fairhead notes, segmentation and narrow identity affiliations often arise in the context of insecure economic, legal and political rights, whether the environment is depleted or not. As conflict develops, "the politics of identity" can become "the politics of resource access" (Fairhead 1997:16), particularly when personal property is at stake. However, that does not mean the property, e.g. land, is necessarily 'scarce' or even if it is scarce, is the determining factor.

Moreover, much ethnic strife is due to the cynical manipulation of ethnicity by political leaders. Colonial policies of divide and rule in Africa, for example, have left a legacy of ethnic divisions that many current politicians are all too willing to exploit. Journalist Bill Berkeley documents how recent conflicts in Liberia, Congo-Zaire, South Africa, Sudan, Uganda and Rwanda share in common a century-long history of racial or

ethnically based tyranny. The main fomenters of violence are well-educated and sophisticated, often with close ties to Western governments and corporations. As Berkeley points out, while 'barefoot soldiers' may carry out the violence on the ground, the planners wear very nice shoes indeed (Berkeley 2001). Playing the ethnic card is a political choice.

It is also important to remember that ethnic violence occurs in many different types of settings -- in weak states and strong states, poor states and rich states. Even in the resource-abundant United States, there have been a number of contemporary black riots in urban ghettos. The precise nature of ethnic conflict is highly culture and context-specific, not easily forced into any kind of model especially one which essentially naturalizes the process by linking it to the environment rather than to complex social, economic and cultural systems.[16]

Another problem with Homer-Dixon's conception of the state is the generally negative characterization of oppositional forces. In <u>Environment, Scarcity and Violence</u> he is careful to note that "social conflict -- even violent conflict -- is not always a bad thing" (Homer-Dixon 1999:5). Yet he rarely takes a look at social movements other than those which he directly links to environmental scarcity. National and transnational movements for women's rights, economic justice, environment and peace not only offer alternative scenarios to the insidious social segmentation he portrays, but are a rich source of alternative research and analysis of the issues he raises. Because of his overriding concern with security, his model is deeply oriented toward the status quo -- what is in place is stable, and whatever upsets it is destabilizing, leaving little room for the possibility of *positive* political transformation.

The Rwanda Exception

Interestingly, Homer-Dixon and Percival's case study of Rwanda finds that "environmental and population pressures had at most a limited, aggravating role" in causing the genocide there and criticizes commentary which attributes the conflict to them as being "too simplistic" (Percival and Homer-Dixon 1998b:201). In a departure from the norm, it purposefully sets about to refute hypotheses which posit a strong causal relationship between environmental scarcity and high levels of grievances, political instability and the manipulation of ethnic identity in Rwanda. Instead the study identifies regime and elite insecurity caused by the civil war and the Arusha accords as the central cause of the conflict and highlights the role of structural adjustment, the fall in coffee prices and declining food production in creating general economic malaise.

Unlike other case studies, it makes a strong distinction between the regime and the state:

> The regime is the set of individuals that has gained control of the
> state's internal relations. In developing societies, the regime usually lacks
> the support of a large share of the population: it represents the interests of
> a specific ethnic, economic or military group. The distinction between
> the internal and external aspects of the state is crucial to our
> understanding of the Rwandan case: it was the Habyarimana regime, not
> the Rwandan state, that faced threats to its security. The regime did all it
> could to maintain its grip on power (215).

This conception is problematic for several reasons: The separation between the internal and external aspects of the state is overstated, since the same actors are often involved in both and policies overlap; and the characterization of developing countries as ruled by small groups ignores the great diversity of political formations. However, it is useful in

that it allows Homer-Dixon to deviate from his own previous conceptions of the state in order to pinpoint specific political actors in the generation of violence in Rwanda. These actors are largely missing from the other case studies, or cast as 'powerful groups' who gain control of the state because of environmental scarcity.

In Rwanda, it seems, more explicit political human agency exists that is not environmentally determined. The study concludes: "If researchers are to understand complex conflicts like the Rwandan genocide, they must be acutely aware of the issues motivating the conflict's actors. They must not only examine what people do and what physical environment they do it in, but why they do it" (217-8).

It is worth considering why Rwanda is the exception. Any of the other cases studies could have also found that environmental scarcity played "at most a limited, aggravating role" in generating conflict if political and economic factors were given the same weight that they were in the Rwandan study. One suspects that the Rwanda exception was made for more pragmatic reasons: the crude environmental determinism of Robert Kaplan et al was finally coming under critical scrutiny in academic quarters (e.g. Ford 1995 and Olson 1995) and Homer-Dixon did not want to be tarred with the same brush.

In his PhD thesis on environmental security, Leif Ohlsson also notes the divergence between the Rwandan and other EPS case studies, although he believes Homer-Dixon should have stayed with a neo-Malthusian analysis. He cites personal correspondence with Homer-Dixon who wrote:

> Yes, you can say that our research and policy advocacy goals were shifted somewhat by a desire to respond to prevailing simplistic arguments (by people from the Washington Post editorial staff to Tipper Gore) about the causes of the Rwandan crisis. I am not repudiating the

central conclusions of the Rwandan paper, however (Ohlsson 1999:119,fn.98).

This acknowledgement provides an intriguing glimpse of the political context in which the EPS project was operating, which will be explored further in the next chapter.

Ingenuity Gaps

Homer-Dixon's main solution to the problems generated by environmental scarcity is a technocratic one, represented by the concept of "ingenuity," by which he means "ideas applied to solve practical social and technical problems" (Homer-Dixon 1999:109). Both social and technical ingenuity are required, with the former being a precursor of the latter. According to him:

> Social ingenuity is key to the creation, reform, and maintenance of public and semipublic goods such as markets, funding agencies, educational and research organizations, and effective government. If operating well, this system of institutions provides psychological and material incentives to technological entrepreneurs and innovators; it aids regular contact and communication among experts; and it channels resources preferentially to those endeavors with the greatest prospect of success (110).

Scarcities of resources, especially renewable ones, will demand ever greater supplies of ingenuity. The need to run resource systems more efficiently will require "tightly coupled and highly complex horizontal and vertical management" (113). And even this may not suffice because "fundamental physical, biological and social constraints may make it difficult to fully compensate for the effects of scarcity" (114).

Homer-Dixon believes one of the strongest barriers to creating the ingenuity to cope with scarcity is none other than scarcity itself because of the "social friction" it generates.[17] In line with his weakening of the state argument, he maintains scarcity can

lead to the formation of small coalitions with narrow interests that prevent the institution-building necessary for social and technical ingenuity to flourish.

In the end he falls back on cultural stereotypes to explain whether a country can break out of this vicious cycle or not. In a "culture of selfishness" people resort to narrow coalitions more rapidly than in a "culture of good will" (120). He cites the Philippines as an example of the former: "Filipino culture encourages cooperation within groups rather than among groups; the resulting isolation of groups from each other -- the oft-remarked clannishness of the society -- undermines the concept of national welfare" (120). Yet the Philippines has one of the most highly sophisticated and integrated democratic social movements in Asia, as witnessed in the anti-Marcos struggle.

Similarly, states already penetrated by narrow coalitions are deemed less able to handle scarcity. The example given here is India, which supposedly does not have strong political parties that can mediate between narrow coalitions and the state (121). Yet not only does India have strong political parties, but a well-developed, publicly funded scientific establishment, an essential ingredient in Homer-Dixon's recipe for ingenuity. Unfortunately, that 'ingenuity' has also demonstrated itself in a destructive manner, with the development and testing of nuclear weaponry.

Homer-Dixon also takes a narrow, Western view of science, neglecting the role of local knowledges, or what James Scott (1998) calls *metis* or practical knowledge, in helping to mitigate scarcity and bring about environmental improvements. "Many of the scarcities facing poor countries demand advanced science like molecular biology that they cannot afford," Homer-Dixon notes (Homer-Dixon 1999:124).

Perceiving poor peasants as largely degraders of their environment, rather than

possible agents of its restoration, he fails to acknowledge the tremendous ingenuity of small cultivators around the world, whose agricultural knowledge is based on close and astute observation. As Scott writes, these cultivators have a vital stake in the results of their own experimentation. Unlike research scientists or extension agents, they live all year in the field of observation and will directly benefit or suffer economically from the impact of their decisions. Moreover, contrary to Homer-Dixon's formula, Scott maintains that the poverty or marginal economic status of these cultivators can itself be "a powerful impetus to careful observation and experimentation" (Scott 1998:324).

Homer-Dixon (1999) claims his theory of ingenuity gaps integrates the neo-Malthusian approach which focuses on the physical causes of scarcity and poverty with the neoclassical economics and distributionist approaches which emphasize social factors such as unequal resource allocation, ineffective markets and public policies. "Social improvements such as better markets and less unbalanced wealth distribution often alleviate the negative effects of scarcity," he writes. "But a society's capacity to make these improvements -- to deliver the required social ingenuity -- will be partly determined by scarcity itself, which is powerfully influenced by the society's physical context" (43).

When it comes to poor countries, however, his neo-Malthusian predilections generally win out. He strikes an apocalyptic note, warning that poor societies may lose the race to outrun scarcity, sinking into widespread violence, crisis and decay. He predicts a world increasingly bifurcated into countries that have an adequate supply of ingenuity to face rising scarcities and those that do not (44).

The concept of ingenuity thus becomes an ingenuous way to rationalize

persistent social and economic inequalities between and within countries, and to place the onus on population-related environmental depletion. Through the concept of ingenuity, ideas also become disembodied; the understanding of human agency is largely limited to mechanistic interactions between ideas, institutions and scarcity.

In his latest book, The Ingenuity Gap (2000), Homer-Dixon seems somewhat less Malthusian and more optimistic. He criticizes "limits to growth" thinking:

> [T]he entire neo-Malthusian rhetoric of absolute resource limits, or to use the popular phrase, of "ecological carrying capacity," has come to strike me as deeply misleading, because it implies impending, unbreachable constraints on human development. Human history is a triumphant record of people smashing through such constraints (374).

In his travels in Bihar, India, Homer-Dixon comes to the conclusion that the state's problems are not the result of overpopulation, but of the state's inability to provide an adequate supply of technologies and institutional reforms. He takes a few steps into the realm of political economy, but in the end stops short, focusing on technical and bureaucratic fixes for land and water scarcities rather than the power dynamics between rich and poor that have blocked economic and social progress in the state. However, one is left with the hope that in the future he might risk a few more steps and that perhaps his journey has just begun.

III. RELATED MODELS: CHALLENGE OR CORROBORATION?

Homer-Dixon's work has helped inspire a number of other studies of environmental conflict, based on case studies, modelling exercises and multivariate statistical analyses. This part considers the most significant of these -- the NATO CCMS study, research by Gunther Baechler and by Colin Kahl, and the State Failure

Task Force -- to determine to what extent they reinforce or challenge his findings. It concludes with a consideration of alternative political ecology approaches.

The NATO CCMS 'Syndrome' Approach

One of the best known studies, "Environment and Security in an International Context," was undertaken under the aegis of the NATO Committee on the Challenges of Modern Society (CCMS). Founded in 1969, CCMS is a civilian branch of NATO, which encourages cooperation of alliance members on research projects, particularly those related to environmental problems. Since the end of the Cold War, CCMS has played an important role in building bridges with Central and Eastern European countries through incorporating them into research projects (Lietzmann and Vest 1999).

In 1991 NATO adopted a new Strategic Concept which broadened its concept of security to include threats from "non-traditional sources" in an expanded regional and global context. The Strategic Concept acknowledges that political, as opposed to purely military, means are critical for achieving NATO objectives and that security and stability involve not only defense but political, economic, social and environmental elements (86-87). According to the CCMS study, NATO now needs to take into account "the impact of the negative consequences of environmental stress on the potential incidence or escalation of conflict" (92).

The CCMS study employed a variety of consultants, although the main groups responsible for developing the conceptual framework were the German think tank Ecologic and the U.S. firm Evidence Based Research. For the analysis of environmental conflict, the study drew heavily on the work of Gunter Baechler and the Environmental

Conflicts Project (ENCOP) of the Swiss Peace Foundation.[18]

The CCMS study has a number of the same shortcomings found in Homer-Dixon's work. Its independent variable of "environmental stress" is conceptually muddled, comprising both the real or perceived scarcity of renewable natural resources as well as resource degradation (although unlike Homer-Dixon it does not fold social distribution into the variable too). Its dependent variable is "security," understood in its inverse form as "the potential incidence or escalation of conflict" (Lietzmann and Vest 1999:96-97). Like Homer-Dixon, the CCMS study mentions many of the contextual factors which affect whether environmental stress leads to conflict or not. It acknowledges that "political, economic, social and economic issues are at least as relevant to the incidence of conflict as environmental stress" (101). Nevertheless, the study maintains that it is possible to isolate environmental stress from these other factors, and to analyze its impact on them. The CCMS study identifies four types of environmental conflict: ethno-political conflicts, migration conflicts, international resource conflicts, and GEC-related conflicts. The degradation narrative figures prominently in the migration category, with the assumption that high population pressure in eco-regions of low productivity "causes either local conflicts or migration which, can in turn, lead to conflicts in the area of destination" (115). Population pressure also pushes people to marginal areas where they become more susceptible to natural disasters. Ethno-political conflicts can be influenced by population growth too; in Rwanda, Bangladesh and Assam, "population pressure on an ecologically-sensitive region beset with environmental stress contributes to the hardening of inter-ethnic rivalries" (111).

On the positive side, the CCMS study recognizes more explicitly than Homer-Dixon the role of large-scale resource extraction, such as mining, in environmental degradation. However, the predominant focus is still with the prime locae of the degradation narrative: drylands, mountain areas, tropical forests, and urban slums.

The study utilizes the "Syndrome Approach" to identify patterns of environmental stress which can help policymakers develop indicators for early intervention. These range from the "Sahel Syndrome" where "ecological carrying capacity" is exceeded in marginal regions, to the "Favela Syndrome" where "uncontrolled" population growth and rural-urban migration leads to a long list of social and environmental ills, to syndromes associated with waste dumping and industrial pollution (124,126).[19]

Although the syndromes are experimental hypotheses, their impact is to simplify, de-contextualize and naturalize complex site and time-specific processes of social and environmental change. Moreover, because syndrome often refers to concurrent symptoms or signs of biomedical abnormality, the use of the term also gives the implicit impression of a diseased Third World.[20] In general, despite some differences, the NATO CCMS study reinforces Homer-Dixon's analysis rather than refuting it.

Baechler's 'Maldevelopment' and Kahl's DES Variable

In his own scholarly work, Gunther Baechler emphasizes the critical function of agrarian transition, something which is missing from Homer-Dixon's analysis: "Environmentally caused conflicts should be understood as struggles of the land against the town, as competition among endangered rural livelihoods and invasive modernity"

(Baechler 1999:227). However, this modernity is not sufficiently elaborated; rather he encapsules it in Vandana Shiva's rather vague term of "maldevelopment" and describes social inequalities in access to natural capital as "environmental discrimination" (87). He largely accepts the artificial distinction between the traditional and the modern. He assumes that the former is less productive, adopting the conventional wisdom of the degradation narrative:

> Against the heterogenous background of a dynamic modern sector and a traditional sector becoming more and more unstable, a politically powerless and economically ever more marginalized rural society is forced to overuse the renewables available and, as a consequence, to destroy the living space rural producers depend on (10).

Predictably, these marginalized people then migrate to already over-crowded peri-urban areas. Baechler pays greater attention than Homer-Dixon to the need for rural livelihood diversification through off-farm alternatives, but his analysis is equally steeped in population and environmental determinism.[21]

This impacts the nature of the 'empirical evidence' he uses to prove his case. In South Africa black women cannot help but degrade the environment, he asserts, since they are among the most marginalized groups and are responsible for provision of food, water and fuel (189). In Bangladesh, where there is population pressure on scarce resources, the rural population is deprived of fresh water because of seasonal drought and the negative impact of floods. In reality, there is plenty of fresh drinking water in most areas of Bangladesh even in the dry season; the scarcity is lack of public investment in filtration and sanitation.

Baechler blames ethnic troubles in the Chittagong Hill Tracts in Bangladesh on overpopulation. He paints the country as a place where nature is out of control, forcing

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economic and "environmental disaster refugees" to migrate to the more environmentally favorable Hill Tracts (199). (In fact, the Hill Tracts are not more environmentally favorable than the fertile lowland delta which comprises most of Bangladesh). He notes in passing that the government encouraged the settlement of Bengali migrants in the Hill Tracts, but fails to elaborate the political reasons why, i.e. as part of a long strategy of colonization and counter-insurgency against the indigenous inhabitants (Chittagong Hill Tracts Commission 1991).

In the end, there is substantial agreement between Baechler and the EPS project. This is also the case with Colin Kahl whose work draws heavily on Homer-Dixon. Like environmental scarcity, Kahl's composite variable of demographic and environmental stress (DES) is broad and vague, encompassing population growth and the degradation, depletion and maldistribution of renewable resources. In developing countries DES has predictably negative consequences such as increasing the number of marginalized people, creating volatile "youth bulges," and heightening popular grievances against the state. One of the forms the latter takes is "demands for major development projects" (Kahl 1998:87); here Kahl, like Homer-Dixon, displays little knowledge of the elite politics behind the generation of development projects.

Diverging from Homer-Dixon, Kahl believes that DES does not need to dramatically weaken states in order for violence to occur because "the purposive action of state elites" is often implicated in violence. However, DES is often the underlying cause since "it can simultaneously create threats to a regime and opportunities for state elites to pit social groups against one another" (90). Whether or not DES results in "state exploitation conflicts" depends on the intervening variables of inclusive institutions and

"groupness," a.k.a. the degree of social segmentation (90-91).

In case studies of violent conflict in Kenya and the Philippines, Kahl goes into some detail about state politics, but human agency largely plays second fiddle to DES determinism and the chain of causality is heavily neo-Malthusian. Thus, DES was at the root of the Communist insurgency in the Philippines in the late 1960s, and it was population growth that frustrated land reform efforts. During the Marcos years, Kahl claims, acute DES led to the marginalization of millions of Filipinos and forced the government to borrow from abroad because of the significant gap DES created between domestic savings, investment needs and government expenditures. Later on Kahl notes how Marcos stole billions of dollars in foreign aid and loans, but somehow this is much less important than DES in the government's decision to borrow (Kahl 2000). In Kenya, violence erupted in 1991-93 "because elites were threatened by demographically and environmentally induced social pressures" (Kahl 1998:118). There is little to challenge Homer-Dixon here.

Multivariate Statistical Analyses

The methodological shortcomings of Homer-Dixon's and related models have led some researchers in a more empirical direction. Hauge and Ellingsen (2001) use data from 1980-1992 to test statistically various hypotheses on the relationship between environmental scarcity and civil conflict. They conclude that countries suffering from land degradation are more prone to civil conflict, but that the level of economic development has the strongest effect on both incidence and severity of conflict. In general, economic and political factors are more important than environmental ones. The environmental data which they use are problematic, however, a fact which they

acknowledge. For example, the soil degradation data are based on the 1990 UNEP World Map project criticized by Lindert (2000) and as noted above, deforestation data are similarly unreliable (Leach and Fairhead 2000).

The largest multivariate statistical analysis is that of the State Failure Task Force (SFTF). On the basis of a request by Al Gore, in 1994 the CIA convened the SFTF, a group of independent researchers whose mandate was to identify the factors that "distinguish states that failed from those which averted crises over the last 40 years" (Esty et al 1999:49). The SFTF examined a wide range of demographic, societal, economic, environmental and political indicators influencing state stability; environment was not a priori the focus of the study.

The results of Phase I of the SFTF found that environmental factors did not directly contribute to state failure, and that instead infant mortality (as an indicator of general material well-being), openness to trade, and level of democracy were the critical discriminators between stable and failed states. Phase II confirmed the importance of these three variables, but refined the democracy variable to include "partial democracies." It found that partial democracies are less stable than full democracies or autocracies.

Phase II also further tested environmental variables and again confirmed that environmental change does not appear to be directly linked to state failure. However, the researchers found evidence of an indirect causal mechanism:

> Deforestation and soil degradation appear to diminish the quality of life, as measured by infant mortality rates, for low-capacity states that are socially vulnerable to disruptions in soil ecosystems; and infant mortality has been shown to have a direct impact on the likelihood of state failure (66).

But again, the soil erosion data they use is based on the same unreliable UNEP data set; they themselves note the generally poor quality and paucity of environmental data. In any case, the connection they find between environmental change and state failure is weak to say the least, and the authors stress that a country's institutional vulnerability to environmental change and ability to cope with it effectively are at least as important.

While these analyses challenge the environmental determinism of the EPS project, their statistical approach is similarly limited in terms of the ability to comprehend the dynamic interface between environmental resources and different sets of actors, with differential access to power. For this one must look elsewhere, toward political ecology.

Alternative Approaches

In political ecology, write Peluso and Watts (2001), "the environment is an arena of contested entitlements, a theater in which conflicts or claims over property, assets, labor, and the politics of recognition play themselves out" (25). Emerging out of this tradition, the environmental entitlements framework offers a much more complex, historical and pluralist approach to understanding both the dynamics of local ecologies and the diverse institutions and differentiated social actors which affect and are affected by them (Leach, Mearns and Scoones 1997). It moves beyond simple cause and effect relationships to what Black calls 'contextualization' -- "the examination of complex, overlapping and sometimes contradictory trends at a range of spatial scales" that is the hallmark of political ecology (Black 1998:185). This kind of contextualization is very different from presenting the 'context' as the medium in which environment and scarcity

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interact to produce conflict.

Using the entitlements approach, as well as a more elaborated understanding of violence, Peluso and Watts (2001) rethink the relationship between environment and conflict. Their starting point is not scarcity, but the historical and social appropriation of nature by humans; the properties of particular natural resources meanwhile shape the forms of that appropriation. They focus on three broad aspects of the social relations of production: the patterns and regimes of accumulation, the forms of access to and control over resources, and the diversity of actors engaged in these relations. Their analysis is not narrowly materialist, however. They write:

> [T]he labor process is the point of incubation of historical and cultural fields of power in which human agency (organized through differing social forms: firms, the state, households, and so on) is expressed. In turn these fields of power constitute institutional and discursive fields of struggle. These too shape environmental processes. From the confluence of these two expressions of political economy -- the social relations of production and the social fields of power -- emerge the forms of contention (always differentiated and varied) that can encompass both physical and symbolic, organized and disorganized, state sponsored and "civic", and highly mixed forms of violence (29)

Such an approach yields no one grand over-arching model;[22] rather it is an analytical starting point, and not end point, from which to investigate specific case studies, which may or may not yield an easily generalizable theory. This can be counterpoised to Homer-Dixon's approach, where deterministic patterning and the acceptance of key assumptions such as the degradation narrative in effect meant that starting point and end point were virtually assured to be the same, limiting the scope of inquiry in between.

In a recent critique of Peluso and Watts' framework, Kahl argues that one of its drawbacks is that "it is not a causal theory, at least not in any systematic sense" (Kahl

2002:142). I would argue that this is in fact a strength, not a weakness, and that environmental conflict research would do well to step off the simple causal pathways it has followed to date even at the risk of getting lost in specificity and complexity.

IV. CONCLUSION

This chapter has taken a close look at the methodology, assumptions and evidence underlying Homer-Dixon's EPS model of environmental conflict in order to reveal its weaknesses as well as to point to alternative approaches grounded in political economy and political ecology. The rigidity of the EPS model, however, should not be seen solely as a methodological or epistemological problem. It must also be viewed in the context of the pressure to produce policy-relevant knowledge. The next chapter investigates the combination of forces that shaped the construction and execution of Homer-Dixon's three major projects as a case study in the political economy of knowledge production.

Endnotes to Chapter Four

[1]. Jointly organized by the American Academy of Arts and Sciences and the University of Toronto Peace and Conflict Studies program, the Environmental Change and Acute Conflict project involved the collaboration of 40 scholars and the convening of several meetings to research and discuss the topic. The findings formed the basis of Homer-Dixon's article in International Security (1994) and Scientific American (1993). Also jointly sponsored by the American Academy and the University of Toronto, the Environmental Scarcities, State Capacity and Civil Violence Project commissioned case studies by regional experts. For more on both projects, see the following chapter.

[2]. Bangladesh-India, Mexico (Chiapas), Israel-Palestine, Pakistan, Rwanda, Senegal-Mauritania, South Africa, El Salvador-Honduras, Haiti, Peru, and the Philippines.

[3]. They also criticize social scientists like Gleditsch for marginalizing the physical circumstances of human society by stressing the social roots of conflict in developing countries (Schwartz et al 2001:277).

[4]. Interestingly, the model Taylor (1992) critiques was developed at MIT, where Homer-Dixon did his graduate work. It was also supported by USAID with the intended objective of policy intervention. Its assumptions are Malthusian.

[5]. Dalby develops this theme at length in his forthcoming book (2002) Environmental Security.

[6]. For more information on the conflict in the Niger Delta, see Ibeanu (2000) and Watts (2001); on Bougainville, see Boge (1999).

[7]. According to Lindert, the preannounced purpose of the project -- to draw the attention of policymakers to the dangers of bad land and soil management as a basis for establishing an action program -- "mixed prejudgments of causes and remedies into the scientific inquiry itself" (Lindert 2000:20).

[8]. Lindert (2000) questions the overall emphasis placed on erosion as the main cause of land degradation. Concerns about erosion have a more dramatic appeal, he argues, and have greater implications for social intervention, yet soil nutrient imbalances due to intensive cropping and inadequate fertilization may in fact be the larger problem.

[9]. For an analysis of the complex forces behind land degradation and forest clearance in Chiapas, see O'Brien (1998). Using satellite imagery from 1974 and 1989, for example, she shows the impact of armed conflict in Guatemala on forest settlements in the region. That conflict forced 46,000 Mayans over the border into Chiapas.

[10]. Former bantustans, refugee encampments, and urban squatter colonies are what anthropologist Anna Tsing has ironically termed "Malthustans," environmentally degraded areas where population pressure and depleted resources are pushing the

environment into a downward spiral (Tsing 1995).

[11]. Black also questions the validity of the migration statistics on which Homer-Dixon's analysis of Bangladeshi out-migration to India are based (Black 1998:24).

[12]. Noorduyn and De Groot (1999) call for better interaction between the security, environmental science and anthropology fields in the study of environment and conflict, but do not offer a substantive critique of the EPS project's approach.

[13]. Although women are largely invisible in Homer-Dixon's work, there are other cases where their roles in biological and social reproduction are more openly blamed for environmental degradation. Mahmoud cites the case of Sudan where environmental studies researchers were instructed to go out to the villages and collect data about how women destroy forests by collecting firewood and by neglecting resource conservation (Mahmoud 1999).

[14]. Heyser's case study of Limbang District in Sarawak found, for example, that environmental change largely due to logging eroded women's major roles in the subsistence economy and made them more dependent on male wage-earners and hand-outs from the logging companies (Heyser 1995).

[15]. For an analysis of the immiseration accompanying diamond mining and conflict in Sierra Leone, see Richards (2001).

[16]. For a critique of the naturalization of ethnicity and scarcity, see Hildyard (1999).

[17]. De Soysa (2000) criticizes this line of reasoning. On the basis of a multivariate model he develops, he suggests that countries which have an abundance of mineral wealth may have less incentive to innovate and diversify economically.

[18]. The full ENCOP studies are published in German. See Baechler et al (1996).

[19]. The 16 syndromes are the Sahel Syndrome, the Overexploitation Syndrome, the Rural Exodus Syndrome, the Dust Bowl Syndrome, the Katanga Syndrome, the Mass Tourism Syndrome, the Scorched Earth Syndrome, the Aral Sea Syndrome, the Green Revolution Syndrome, the Asian Tigers Syndrome, the Favela Syndrome, the Urban Sprawl Syndrome, the Major Accident Syndrome, the Smokestack Syndrome, the Waste Dumping Syndrome, and the Contaminated Land Syndrome.

[20]. Baechler explicitly acknowledges this analogy to disease (Baechler 1999:2).

[21]. For further critique of Baechler's model, see Peluso and Watts's (2001) introduction to Violent Environments.

[22]. However, Peluso and Watts (2001:28) do present a figure of "A Political Ecology of

Environmental Violence," showing how these forces interact with each other.

CHAPTER FIVE

Circumscribed Heterodoxy:

An Account of Thomas Homer-Dixon's Three Major Projects

In this chapter I turn to a closer investigation of agency in knowledge production and dissemination: in this case, the who, when and why of how Homer-Dixon's environmental conflict ideas were generated, supported and spread in U.S. policy circles in the 1990s. The history I recount is largely based on my interviews, Homer-Dixon's archives, and documents I collected in the course of my research. The interviews are necessarily subjective because of the selection of people I was able to interview, the questions I chose to ask and the personal reflections offered by the interviewees. Nevertheless, certain common interpretations emerge which give coherence to the story.

The chapter covers Homer-Dixon's three major projects: the Project on Environmental Change and Acute Conflict (ECAC), the Project on Environment, Population and Security (EPS), and the Project on Environmental Scarcities, State Capacity and Civil Violence (State Capacity), and the political context in which they were brought to fruition. The chapter sets the stage for a more analytical investigation in Chapter Six of the impact of Homer-Dixon's ideas, the nature of the knowledge communities which have formed around such concepts, and the extent to which environmental conflict has actually been securitized.

The history of Homer-Dixon's three projects brings into focus a number of key themes related to the success of his particular hybrid of academic/policy work. First are

the critical roles played by strategic philanthropy and certain powerful personalities in providing the necessary material support and media and policy venues for the spread of his ideas. Second is the importance of the political moment in terms of the post-Cold War security climate, the search for a more democratic approach to foreign policy, and the importance given to the Cairo population conference in the Clinton administration. In addition, there is the factor of crisis and contingency, especially the Rwanda genocide in 1994. Third is the strategic use of demographic alarmism, particularly concerning migration, in the representation of threats. This was deemed necessary to advance liberal foreign policy goals despite consistent concerns that such a negative approach might backfire. And lastly, there is the imperviousness of Homer-Dixon's framework to critical advice and challenges.

Throughout Homer-Dixon's three projects one witnesses the phenomenon I term "circumscribed heterodoxy." A certain plurality of views are allowed, and in some cases even encouraged, in terms of advisory meetings and the like. However, there are usually less seats at the table for voices from the South, and those critiques which do surface appear ultimately to have little influence. This phenomenon is not unique to Homer-Dixon's projects, of course; it is common in the politics of consensus-building, manifesting itself, for example, in the larger processes of reframing foreign policy in the early years of the Clinton administration. The danger of circumscribed heterodoxy is that the illusion of plurality masks the reality of uniformity.

This chapter is organized into three parts. Part One describes the evolution of the Project on Environmental Change and Acute Conflict; Part Two looks at the Washington political context, especially the role of Al Gore, Timothy Wirth, Robert Kaplan and the

Pew Global Stewardship Initiative in Homer-Dixon's rise to success; Part Three addresses the Environment, Population and Security and State Capacity projects and offers some concluding thoughts on the recurring themes cited above.

I. ENVIRONMENTAL CHANGE AND ACUTE CONFLICT

Initiated in 1990, the Project on Environmental Change and Acute Conflict (ECAC) was a joint venture of the American Academy of Arts and Sciences[1] (Academy) in Cambridge, Massachusetts and the Peace and Conflict Studies of the University of Toronto, Homer-Dixon's academic base. Over the three year course of the project, it received funding from a number of foundations and institutions, including the Pew Charitable Trusts, the Donner Canadian Foundation, the W. Alton Jones Foundation, the John D. and Catherine T. MacArthur Foundation, and the Canadian Department of National Defense. Project directors were Jeffrey Boutwell of the Academy, George Rathjens at the MIT, and Homer-Dixon.

The project concentrated on three main areas: water scarcity, population displacement and the economic repercussions of reduced agricultural and resource productivity. It commissioned a number of papers on these themes, six of which were published by the Academy. (See Appendix B for a list of publications of the three projects). This project launched Homer-Dixon into national and international prominence, but before exploring it in more detail, it is important to look at the genesis

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* Hereafter referred to as the "Academy." The acronym AAAS will be used for the American Association for the Advancement of Science, which also became involved in Homer-Dixon's work at a later stage.

of his involvement.

The Cambridge Period: On the Threshold

Thomas (nickname Tad) Homer-Dixon was born into a family closely associated with environmental issues. His father was a professional forester on Vancouver Island in British Columbia, responsible for the watershed which serves the city of Victoria. Homer-Dixon told me that his father was "one of the world's cleanest loggers," responsible for the development of a number of sustainable logging practices such as small clear-cuts. His mother had a degree in botany and was a naturalist and illustrator.

Homer-Dixon's scholarly interest in the environment did not develop until later, however. As an undergraduate at Carleton University in Ottawa in the late 1970s, he became concerned about the Cold War military build-up and the presence of Trident submarines in Washington state. His ensuing interest in conflict theory and arms control led him to enter a PhD program in Political Science at MIT in 1983. In 1989 he completed his thesis on notions of us and them in defense bargaining ("They and We: An Empirical and Philosophical Study of a Theory of Social Conflict") under the supervision of Hayward Alker.

Before completing his thesis, Homer-Dixon travelled in India, the Soviet Union and Africa. He was in India during the massacres of Bengali settlers in Assam and in Transkei he saw "incredible land degradation." A fellow student who knew him at the time remembers him returning from the journey strongly affected by the environmental devastation and poverty he saw, which now seemed as important to him as the nuclear arms race. After the trip he had a "wonderful messianic quality," according to this

observer, and put up large photographs of India in the corridor at MIT. George Rathjens, who was one of his supervisors, helped nurture this interest in the environment.

After his PhD, Homer-Dixon made a "wholesale shift" (his own words) to environmental issues. He stayed on another seven to eight months at MIT on a post-doctoral fellowship from Canada to study global environmental change and became involved with the Harvard-MIT global environmental studies group. By virtue of having received a SSRC/MacArthur Foundation dissertation fellowship in International Peace and Security in 1986, Homer-Dixon was also part of a network of other young scholars whom MacArthur encouraged to broaden the concept of security in the waning years of the Cold War. These included Ronnie Lipschutz and Peter Gleick, both at the University of California-Berkeley, who focused on resource and environmental issues and who co-founded the Pacific Institute in 1987. According to Homer-Dixon, the MacArthur program was extraordinary; it took chances on people in the early years and pushed boundaries, creating "a community of people, a culture."[1]

In 1989 Homer-Dixon attended a conference on environment and security in Cambridge, MA, co-sponsored by the SSRC and the American Academy of Arts and Sciences. According to him, it did not go very well and later he dropped in on Jeffrey Boutwell at the Academy to suggest that a theoretical framework needed to be developed to address these issues. (According to Boutwell, George Rathjens had already "talent spotted" Homer-Dixon and urged the Academy to work with him.) This marked the auspicious beginning of a long working partnership.

The Academy itself was part of the MacArthur web, having received funds from the foundation in the late 1980s and early 1990s to work on emerging security issues.

Boutwell, Program Director for International Security Studies, told me how the Academy had been well-suited for the job. Unlike Washington, D.C.-based think tanks like the Brookings Institute and Heritage Foundation, the Cambridge-based Academy is not in such close proximity to policymakers and is thus freer to concentrate on more long-term issues. While it has over 3000 elected members from all academic disciplines, it has a small staff and is able to move forward without the bureaucratic inertia of larger research organizations.

Using some MacArthur program money, the Academy got Homer-Dixon started. He also received funds from Richard Rockwell at the SSRC to do a paper on environment and conflict, which was discussed at a SSRC-sponsored meeting at MIT. The paper later formed the basis for Homer-Dixon's first major publication, "On the Threshold: Environmental Changes as Causes of Acute Conflict," which appeared in the prestigious Harvard/MIT journal International Security in the fall of 1991.

By this time Homer-Dixon had moved to Toronto to become the Director of the Peace and Conflict Studies Department at University College, University of Toronto. However, he acknowledged that the fact he had been "hanging around Cambridge" made a difference in terms of being able to get published in the International Security journal. (Previously in 1987, he had published a research note on Lanchester equations in the journal.) International Security was casting around for things that would open new issues, but still fit their agenda. The article was a "huge breakthrough" for him. It wasn't terribly innovative, he remarked, but it was a way for people to organize their ideas. He brought a structure and framework to the environment and security field, and in so doing, became its reference point.

The article was also what brought him to the attention of journalist Robert Kaplan. Homer-Dixon passed the article to one of Gore's assistants, who passed it to Gore's speech writer, who then passed it to his friend Kaplan. Homer-Dixon heard later that his article was circulating on Vice-President Gore's Air Force Two.

In retrospect, it seems somewhat surprising that an article like this, in a scholarly journal, would have such an impact, especially since the Cold War mentality in security studies was still prevalent at the time. However, against this more conservative backdrop, Homer-Dixon's ideas were "very exciting and provocative," according to a scholar in Cambridge security circles. They appealed to a wider community than narrow security specialists, most of whom were "bean-counters," i.e. still counting weapons. Homer-Dixon was ambitious, this observer noted, but he was also "bright and conscientious and passionate to have his theories affect the field." And despite his focus on a new arena -- the environment -- his methods were in the classic IR vein, with models and flow charts, so that he could still appeal to the community of security scholars from whose ranks he came.

However, he encountered resistance from some members of this community, who thought his work was analytically weak and would not have survived without funding. As one interviewee wryly noted, "A little good idea by a good scholar can spread like wildfire without money; this half-baked idea could spread like wildfire because it had money behind it."

While the article was a big breakthrough, the nature of Homer-Dixon's partnership with the Academy also yielded other tangible results, helping to solidify his standing in the philanthropic and policy worlds.

Forward Motion

"Tremendously exciting" were the words Jeffrey Boutwell used to describe the Project on Environmental Change and Acute Conflict Project (ECAC). It was an opportunity to take Homer-Dixon's ideas, circulate them in the wider policy and scholarly community, and figure out whether they were "worthy and legitimate components of national and international security."

A preliminary meeting to shape the project, entitled "Environmental Change and Threats to Security," took place March 30-31, 1990 in Cambridge, MA, attended by fifteen participants, none of whom were from the developing world (ECAC 1990a).[2] The participants made several recommendations which helped to shape the project as well as the future direction of Homer-Dixon's work. They agreed that the project:

(1) should not try to undertake original research, but rather should "identify and synthesize the best existing knowledge so that it is usable by scholars, educators, and policy makers" (ECAC 1990a:3);

(2) should aim to influence policy with the aim of avoiding environmental conflicts and should therefore consider how to present "the most persuasive arguments" to policymakers. A footnote elaborates: "As one participant put it: Our objective should be to alter the State Department's list of countries of importance to American interests. Bangladesh should be put on that list" (3);

(3) should keep in mind the interests of its audience.

Here the recommendations are particularly telling:

For example, policy makers in both the U.S. and Canada will be

sensitive to issues of refugees and migration because these countries are magnets to immigrants. As another example, the intelligence community might be particularly receptive to research on the links between environmental variables and conflict. Intelligence analysts are aware of the importance of "indirect" causes of conflict and of the need for a long-term policy perspective. This community is also a promising conduit to the upper levels of decision making (3).

These recommendations, which would later become de-facto decisions, directed the project away from original research which might have challenged or at least complicated Homer-Dixon's causal path from environmental scarcity to conflict. The desire to attract policymakers also led it down the dubious path of stressing migration issues, as well as appealing to the intelligence community. Participants did call for involvement of experts and resource organizations from developing countries, and the project would later make some effort to accommodate this request. Yet in essence the agenda was already set since there was general acceptance that environmental degradation was a cause of conflict. As the concluding paragraph remarks, "In tracing the possible paths from environmental change to conflict, the project should show that many variables are linked together in a complex system, without obscuring the role of environmental degradation as an underlying force" (8). This passage illustrates just how entrenched the degradation narrative already was as an a priori conviction; as Chapter Three described, even before the end of the Cold War, it began to feature prominently in the literature on environment and security.

After securing $213,000 from the Donner Canadian Foundation, the ECAC project held another meeting in Cambridge on October 26-27, 1990 (ECAC 1990b). At this point, seven commissioned authors were confirmed, including three from developing countries, although once again there were no Southern participants at the

meeting. Several important concerns were voiced during the discussion. One was that authors should identify 'control cases' where there is not a clear link between environmental change and conflict. Another was the fear that the project might generate knowledge useful to the police and military in developing countries; a participant warned that these institutions might use the linkage between environment and conflict to "justify suppression of environmental NGOs, which are often the sole locus of democratic activity in developing countries" (3). There was also a discussion about the negative impact of large development projects such as dams, hydroelectric schemes and irrigation systems on human habitats, with the conclusion that authors "examine the aid-allocation policies of the North that support such projects" (3).

These concerns apparently had little impact on the development of Homer-Dixon's own framework as judged by his writings (see previous chapter). However, the ECAC project did allow a certain pluralism of views which are reflected in the first six papers presented at two June 1991 research workshops in Canada (ECAC 1991a).[3] For example, while New York Times South Asian correspondent Sanjoy Hazarika's paper on Bangladeshi migration to Northeast India was stereotypically neo-Malthusian, even advocating "aggressive family planning programs," Astri Suhrke's paper on population displacement challenged Homer-Dixon's views of migration. During the second workshop, Bernard Nietschmann, the author of a paper on Nicaragua, was reported to have "disputed the role of population growth and resource scarcity in precipitating the conflict between the Sandinista government and the Miskito Indians" (7).

The fact that ECAC lacked sufficient developing country involvement was noted by several prominent people consulted by the project, including Maurice Strong,

organizer of the upcoming 1992 UN Conference on Environment and Development (UNCED or Earth Summit) (Homer-Dixon correspondence 2/15/91).[4] By September 1991, the project had moved to establish collaborative arrangements with the Center for Science and Environment in New Delhi and the African Center for Technology Studies (ACTS) in Nairobi (ECAC 1991b) (it is unclear how these arrangements actually functioned in practice), and would later develop a relationship with the Institute for Strategic and International Studies in Malaysia and the Peace Studies Institute in the Philippines (ECAC 1992b). In November 1991 the project held its first research workshop outside of North America, in Kuala Lumpur, Malaysia (ECAC 1991c). For the first time, developing country participants were in the majority, representing Malaysia, Thailand, the Philippines, and Indonesia.

At this workshop participants clearly challenged Homer-Dixon's framework. For example,

> Several participants suggested that the research project has been too negative about the consequences of environmental change. Population movements, economic decline, disruption of institutions, and even conflict can have positive as well as negative social effects. In particular, mass mobilization and some forms of civil strife can produce opportunities for constructive change in institutions, the distribution of land and wealth, and processes of government (5).

In discussions of upland deforestation in the Philippines, some participants stressed the need for a "political-economic analysis" of environmental decline, noting how the Filipino state has long reflected the capitalist interests of the elite and has been an instrument for plunder, with many of the regulators of resource extraction "intimately involved in the extraction process itself." Their call for "a revolutionary change of the country's social structure" was met, however, with neo-Malthusian pessimism on the part

of other participants who argued that even a sharp improvement in the country's social, political and economic systems would not solve the resource problem quickly enough (6). The identities of the participants are not revealed in the commentary so it is impossible to know who took what side of the issue. However, the controversy itself is illuminating.

The final review conference of the project took place at the Brookings Institution in Washington, D.C. in May 1992 (ECAC 1992a). Present at the conference was Leon Feurth, Vice President Gore's senior advisor on foreign affairs. According to one participant, the project organizers were wooing Feurth "something fierce." While the conference report mentions a few critical comments by participants, it concludes that most people present "agreed that complexity and context-dependency do not undermine the project's central conclusion that there are important linkages between environmental change and conflict" (ECAC 1992a:10).

This conference differs from the rest in its attempt to solicit policy recommendations from participants. Recommendations included targeting the intelligence community, North-South collaboration in population control programs, and better aid policies, including supporting land reform and debt relief. Geographer Diana Liverman offered suggestions for improving environment-conflict research such as looking at adaptation and cooperation as well as conflict, more precise interrogation of case studies, framing environment-conflict linkages as hypotheses (and presumably not as faits accomplis), and asking people in the field -- "peasants, farmers, and local government officials" -- if there was a connection between environmental change and conflict (14). Unfortunately, these suggestions were never adequately taken on board.

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In reading the various ECAC meeting reports, a consistent pattern emerges of circumscribed heterodoxy, wherein alternative views are solicited but ultimately wield little influence. Among the authors of the commissioned papers as well as meeting participants, there are a few critical and cautionary voices who do not accept Homer-Dixon's framework. The original funding proposal for the project noted, "Project organizers will not try to force participants' ideas and research into a particular mold or procrustean framework" (ECAC 1990c:9). That did not mean, however, that those who begged to differ had the same influence as those who acceded to the framework. In particular, critical voices were conspicuously absent from the most influential of the project's publications, the Scientific American article "Environmental Change and Violent Conflict" co-authored by Homer-Dixon, Boutwell and Rathjens (1993). (Scientific American is a monthly magazine published by the Academy which is accessible to lay audiences as well as scholarly ones.)

This article was planned from the very inception of the project to get the message out to a wider audience of policymakers and the media than the proposed scholarly book (which never materialized). In the article the authors claim to represent the findings of the 30 researchers involved in the ECAC project, yet they use alarmist language and projections to make a case that population growth and resource scarcity are inducing violence in many regions of the Third World. Homer-Dixon himself told me that "the population issue is bigger" in the Scientific American piece than in much of his other work. The degradation narrative is writ large, the complexities and controversies raised during the course of the project writ hardly at all.

In the article's description of deforestation in the Philippines, for example, there

is nothing about the state's role in resource extraction. Instead the emphasis is placed on poor peasants slashing and burning the hillsides, with the resulting resource scarcity driving them into the arms of communist insurgents. A series of flow charts illustrate simplistic causal chains, while photographs of a denuded mountainside, a urban garbage dump in the Philippines, poor Ethiopian women lugging water, and the army on patrol in Assam show us a nightmarish vision of the Third World.

The article literally made the news, landing Homer-Dixon a nationally broadcast interview with National Public Radio, and excerpts appeared in the New York Times, International Herald Tribune, the Toronto Globe and Mail, and a number of other North American newspapers. Homer-Dixon received reports that it had been distributed within the U.S. Environmental Protection Agency (EPA) and National Security Council. It attracted the attention of some members of the mainstream population community in Washington as well as more conservative groups. For example, the anti-immigrant organization Carrying Capacity Network reprinted Homer-Dixon's New York Times op-ed (1993) as the lead article in their bulletin, followed by their own commentary on how desperate immigrants will be pushing hard against U.S. borders and by expanding ethnic diversity, will create competition and conflict within the country (Carrying Capacity Network 1993).

According to an interviewee engaged with the project, the Scientific American article cemented Homer-Dixon's influence -- but also froze his framework. When he was criticized about parts of the article, he responded by adding more arrows in the flow charts but the basic direction of causation remained the same. Above all, Homer-Dixon was a theorist and modeler, this observer remarked, and he was very invested in his

framework.

The alarmist tone of the Scientific American article, as well as other of Homer-Dixon's publications, must also be viewed in the context of security studies more generally. As one IR scholar told me, security studies scholars tend to be imbued with alarmist, worst-case mindsets that are reflected in the project's findings. "The whole emphasis of the field is to identify and analyze looming threats. There is a presumption that this pessimistic, simplistic approach is the best way to make a persuasive argument that will attract attention, as well as money, invitations to conferences, and career advancement."

The ECAC project yielded high enough returns that it would have probably been difficult for Homer-Dixon to abandon his framework even if he had wanted to. In February 1993 he presented the ECAC findings at one of the Western world's most elite gatherings, the World Economic Forum in Davos, Switzerland, and he published another article drawing on project research in the summer 1994 issue of International Security.

The ECAC project gave Homer-Dixon the foundation connections, the hybrid academic/public policy venue and ultimately the media attention to establish himself as a legitimate and important voice in the emerging environment and security debate. It set the stage so to speak, but other developments made the spotlight shine brighter than it might have otherwise. Part Two looks at how certain key people in the media, foundation and foreign policy communities helped advance his work and how certain major events, notably the Cairo population conference and the Rwandan genocide, provided a conducive context.

II. WASHINGTON, D.C.: AT THE TABLE AND UNDER THE TENT

According to a number of IR scholars I interviewed, the early and mid-1990s in Washington, D.C. were a heady time, an "unusual moment" and "real window of opportunity" for academics to influence the foreign policy establishment. While historically the Defense Department had paid for most IR research, in the mid-1990s private foundations saw an opportunity to weigh in on security policy. They began funding more academic research as well as encouraging the bringing together of scholars and policymakers in more open-ended discussions. Homer-Dixon made the most of this process.

Almost everyone I interviewed, whether they liked his work or not, agreed that Homer-Dixon was a very effective academic entrepreneur in this period. According to a prominent foreign policy analyst, Homer-Dixon's concept of environmental conflict was located at "the intersection between scholarly research and an electrifying slogan." However, there were also other effective academic entrepreneurs in similar circles who did not achieve his degree of fame or rate an invitation to dinner with Al Gore. One advantage Homer-Dixon possessed and they lacked was the attention of journalist Robert Kaplan.

"An Unlikely Jeremiah"

Just as the partnership with Jeffrey Boutwell proved mutually beneficial, so did Homer-Dixon's relationship with journalist Robert Kaplan. In Homer-Dixon Kaplan found the scholar who most substantiated his views, while in Kaplan Homer-Dixon

found the journalist who could popularize his. Homer-Dixon is the intellectual hero of "The Coming Anarchy," an "unlikely Jeremiah" (Kaplan 1994:56), with novelty value as well as the right social class: boyish and blue-blooded, a sort of stand-in for Al Gore but without the political baggage. In "The Coming Anarchy" Kaplan wrote that Homer-Dixon's 1991 International Security article might one day be seen as the beginning of our post-Cold War foreign policy. In particular, he stressed the pessimistic, neo-Malthusian aspects of Homer-Dixon's analysis.

According to Jeffrey Boutwell, Kaplan was an important vehicle for getting Homer-Dixon's ideas out there, but in some ways he did more harm than good; people read Homer-Dixon differently after they read Kaplan, Boutwell told me. Homer-Dixon thought environmental scarcity was an underlying, not direct cause of conflict, but after Kaplan's attentions, he got attacked as a determinist even though he was more intellectually rigorous than that.

Homer-Dixon's own view of Kaplan was more appreciative, since for one thing, Kaplan brought him to the attention of Al Gore. Based on an interview with Homer-Dixon, a Canadian journalist wrote in 1994:

> Until earlier this year, Homer-Dixon was known only in academic circles...Enter journalist Robert Kaplan and his February cover story for the Atlantic Monthly magazine, "The Coming Anarchy."...The article struck a nerve and a media frenzy quickly followed. Homer-Dixon was deluged by interview requests from reporters fascinated with the more sensational aspects of his research and the idea of a coming apocalypse. But journalists weren't the only ones interested. Kaplan's article was sent to all U.S. embassies and soon became standard reading material in the Clinton administration. Homer-Dixon found himself briefing Al Gore and James Woolsey on his stories (Pugliese 1994:C1).

In April 1994 Homer-Dixon was invited to Gore's house for dinner. Already as a senator in the late 1980s, Gore had proclaimed the environment a key national security

issue (e.g. Gore 1989), and his book Earth in the Balance (1993) stressed the role of population growth (see Chapter Three). Before the April dinner, both his wife Tipper and he had read Homer-Dixon's first International Security article. Among the people invited to the dinner were Gore advisor Leon Feurth; Timothy Wirth, Under Secretary of State for Global Affairs; Sherri Goodman, Deputy Under Secretary of Defense for Environmental Security; and Kathleen McGinty, Chair of the President's Council on Environmental Quality. They were together for over three hours and according to Homer-Dixon, "covered a lot of ground." They discussed the views of biologist E.O. Wilson and acknowledged that this was a high contingency moment and what happened in the U.S. in terms of policy would affect the rest of the world.

The genocide in Rwanda would turn out to be one of those contingencies. That same April Rwandan President Habyarimana's plane exploded, and the mass killing began. Gore went on record implicating population growth in the genocide, noting "the contribution of rapid destabilizing population growth" not only in Rwanda, but in Somalia and the former Yugoslavia (CNN News 1994). After visiting refugee camps in Zaire, Tipper similarly emphasized the role of population growth in the genocide, calling Rwanda "a tragedy and a warning" before the NGO forum at the ICPD in Cairo (Copans 1994) in a speech which many in the population community considered overly simplistic.

A number of people in the Clinton administration shared these views on Rwanda. Two years later, in his much heralded speech on the global environment, Secretary of State Warren Christopher warned that "We must not forget the hard lessons of Rwanda where the depleted resources and swollen populations exacerbated the political and

economic pressures that exploded into one of this decades greatest tragedies" (Christopher 1996). Timothy Wirth similarly stated that in Rwanda, "...there were simply too many people competing for far too few resources" (Wirth 1996:118). As one U.S. government population policy expert remarked, Clinton, Gore, Wirth and Brian Atwood of USAID were all impacted by Kaplan and Homer-Dixon, especially as "The Coming Anarchy" coincided with the tragic events in the Great Lakes.

In August 1994 Homer-Dixon was invited to Washington again, this time to do a morning briefing on China in Gore's office along with colleagues Vaclav Smil and Jack Goldstone. Homer-Dixon remembers Director of the CIA James Woolsey was present as well as Larry Summers, Undersecretary of the Treasury for International Affairs, Carol Browner, head of the EPA, Kathleen McGinty and several cabinet members. All together there were about 30 people.

While Homer-Dixon's connection to Gore brought him increased prominence, the politics and personalities surrounding the ICPD accelerated his forward motion. Without the ICPD, in fact, it is doubtful whether Homer-Dixon would have attracted so much attention and foundation funding.

The ICPD: Expanding the Foreign Policy Constituency

In many NGO circles, the 1990s are known as the decade of UN conferences, with major international gatherings on environment, human rights, population, women, and social welfare occurring in the first five years. What made these conferences different from ones that came before was the extent of organized NGO involvement. Partly this was a response to the growing strength and insistence of transnational

advocacy networks, but it also reflected the politics of neoliberalism, in which "civil society" was codified, reified, and assigned a role in the "partnership" between the state, private sector and citizenry. The subordinate nature of this role was visible in the very geography of the conferences, where NGO fora were held outside the main venue. In the case of the 1992 Earth Summit, for example, the NGOs were relegated to steaming hot tents in a municipal park; at the 1995 women's conference in China, the NGO meeting was banished amidst controversy to a city on the distant outskirts of Beijing.

In the U.S. the conference which received the most attention, and probably the largest outlay of funds from the philanthropic community, was the ICPD. As discussed in Chapter Two, the flurry of organizing around the Cairo population conference resulted from a confluence of developments, including the desire of the population community to forge an alliance with feminists against religious fundamentalists (and less charitably, to coopt feminist opposition to population control) and internal pressure for reform within population agencies. The Cairo conference also provided an opportunity for the Clinton administration to define a new image of post-Cold War foreign policy as well as to expand the domestic constituency which would support it. Vital to this project was the role played by Timothy Wirth.

Formerly a senator from Colorado and a close political colleague of Al Gore's, Wirth was appointed Under Secretary of State for Global Affairs as part of the Clinton administration's reorganization of the State Department. In the follow-up to the 1992 Earth Summit, Wirth had as many as 150 people working under him in the State Department, although throughout his tenure he operated below the level of a senior policymaker (Hopgood 1998).

Several people I interviewed stressed how Wirth came to the State Department

with a different view of foreign policy. Not only was he more concerned with social and

environmental issues, but according to one population policy analyst, he was a more a

politician than firmly rooted in the foreign policy culture. This had certain drawbacks. A

former State Department official remarked that Wirth lined up issues "like stove pipes,"

instead of undertaking the hard work of institutionalizing environmental concerns into

the State Department bureaucracy. Another noted that his office became "a lightening

rod" for criticism of the administration on Capitol Hill, since opponents could claim that

here was "another lame brain idea of Gore's."

However, almost everyone I interviewed who had been in Washington during the

period acknowledged that Wirth played a central role in organizing U.S. participation in

the ICPD, particularly the NGO coalition. Like Gore, Wirth's environmentalism was

tinged with a heavy streak of neo-Malthusianism. According to a foundation officer who

worked closely with him, Wirth was "always one breath away from birth control." (He is

reportedly a friend of Paul Ehrlich's and his wife is active in population causes.) When

he first joined the State Department, he had little knowledge of women's health issues,

but in the words of the foundation officer, he was part of a new generation of

policymakers who were able "to make the reproductive rights link" with population and

environment issues. He proved particularly adept at making contact with women's

groups around Cairo.[5]

Wirth liked Kaplan and Homer-Dixon's work, many people told me. His own

beliefs were 'neck on neck' with Homer-Dixon's, and he promoted him a lot around the

ICPD. The affinity was not only ideological but strategic. According to one of his close

associates, Ellen Marshall, one reason Wirth seized on the environment and security issue was because its appeal to the security community allowed him to involve them in promoting the ICPD.

Marshall remarked that there was something in the simplicity of the environment and security link that helped it take hold. It was different than more arcane policy issues, such as the international gag rule (the denial of U.S. government funding to foreign organizations which provide or even just counsel women about abortion), which was hard to explain even though it was really a simple free speech issue. The environment and security link was also thrust forth in a dynamic way by Homer-Dixon and Kaplan, who were not the typical foreign policy people. Whether or not it actually influenced policy was not as important as the way it got different players to the table to promote the ICPD, including the CIA which became part of an inter-agency working group. People learned that women were integral to "all this," according to Marshall. Environment and security was a tool to pique people's interest and get them to the right advocacy goal, such as women's rights.

Others share a similar view of the strategic value of environment and security. Homer-Dixon himself sees it as a subversive agenda which brought more progressive issues into conservative security circles since environmental issues are wrapped up with important moral and distributional concerns. The Pew Global Stewardship Initiative (PGSI) also used environment and security as a tool to build a larger constituency for the ICPD and for a broadening of U.S. foreign policy generally. In fact, PGSI worked closely with Wirth and vice versa, and became the largest funder of Homer-Dixon. The next section looks at the PGSI in more detail since its proactive strategies are

fundamental to understanding the next stage of Homer-Dixon's work.

The Pew Global Stewardship Initiative

In the early 1990s, the Pew Charitable Trusts (PCT), whose wealth derives from the Sun Oil Company, became the largest environmental donor in the U.S., as well as one of the most proactive. It set out to shape the agenda of the American environmental movement,[6] and as critics note, to mute criticism of corporate practices, emphasizing a tame lobbying strategy instead (Dowie 2001, Tokar 1997, Greene 1994). An important component of Pew's proactivity was the funding of public relations and media campaigns (Bailey 1994).

Expanding its mandate, Pew began to look more closely at foreign policy issues related to the environment in the early 1990s. In May 1993 it held a meeting on possible grantmaking approaches to the problem of environmental refugees, at which Homer-Dixon made a presentation on the global impacts of environmentally induced migration. As a result of differences of opinion expressed at this meeting, and resistance from traditional refugee assistance organizations, Pew decided not to set up a program explicitly on environmental refugees.[7]

That same year, however, the foundation established the Pew Global Stewardship Initiative (PGSI) to address population and consumption issues in preparation for the ICPD. PGSI was a collaborative effort with the Aspen Institute, a high-powered policy think tank based in Colorado but with offices in Washington, D.C. Susan Sechler was hired to be PGSI director along with five other supporting staff.

Sechler's background was primarily in agricultural policy. After working in the

Carter administration, she moved to a base at the Washington offices of the Aspen Institute where she consulted on food security issues with funding from the Ford Foundation. She also ran the agricultural transition for the Clinton administration. Sechler is known as a dynamic philanthropic and policy entrepreneur. During the PGSI project, her base at the Aspen Institute gave her a fair degree of independence, though it led to an uneasy relationship with the Pew leadership in Philadelphia.

PGSI's July 1993 White Paper laid out its four major project objectives: (1) "to build a stronger conceptual base for global stewardship and its expression in enlightened population and consumption policies;" (2) "to forge consensus among diverse constituencies" working on these issues, and well as to attract new ones; (3) "to inform and improve relevant U.S. and multilateral policies and programs;" and (4) "to increase public understanding of, and commitment to act on, population and consumption challenges" (PGSI 1993a:i). These goals would be accomplished by collaboration with institutions and individuals from three major constituencies: environmentalists, religious communities, and international affairs and foreign policy specialists.

In regard to the latter, Pew hoped to broaden the concept of national security in ways that invoked Homer-Dixon. The White Paper stated:

> The Initiative will endeavor to assist foreign policy specialists in framing the related concerns of population, environment and sustainable development, and in identifying areas where demographic trends threaten regional or international stability. The goal is to elevate these concerns in U.S. foreign policy formulation, international agreements and the work of multilateral institutions (13).

To develop the conceptual base for this endeavor, PGSI would offer support for applied research on the linkages between population, environment and security.

While its applied research strategy was more academic in tone, PGSI also aimed

to influence the media and popular opinion. It hired three top American polling and opinion research firms, representing both Democratic and Republican interests, to do focus group research on attitudes toward population growth and the environment among different constituencies. Interestingly, the researchers found that most people did not have strong neo-Malthusian attitudes; they recommended adding "an emotional component" and "targeted visual devices" such as pictures of traffic jams and degraded landscapes to population messages in order to create the necessary alarm (PGSI 1993b:73-74).

PGSI also hired the Future Strategies, Inc. consulting firm to make recommendations on how to build a campaign on population and sustainable development in Washington policy circles (PGSI 1994a). Although it is unclear whether PGSI followed all the consultants' advice, the report provides a fascinating window on the reasoning behind the strategic use of demographic alarmism.

The Future Strategies report highlights the need for a "grand strategy" to increase international family planning and women's health assistance. The strategy would entail promoting this assistance as critical to environmental protection as well as to the alleviation of the causes of violent conflict (4-5). An information database on population and the environment would be an important advocacy tool since "though the link between excessive population and environmental destruction would seem obvious, there is...little in the way of scientific evidence to draw exact correlations" (11). The report rues the fact that despite PGSI funding, U.S. environmental groups remain "behind the political curve" on developing programs linking population and environmental degradation (2).

Americans will have to be convinced that "unchecked population growth and destruction of the environment are key national security concerns of the 21st century" (31). So will specific constituencies, such as defense and intelligence policymakers and intellectuals as well as Congressional actors, notably the Black Caucus who should be worried about the social chaos in Africa described by Kaplan. Meanwhile, multilateral aid organizations like the World Bank should adopt a "credit and condoms" approach, insisting that credit, education and disaster relief programs include family planning information (20).

The report considers a variety of arguments to sway the public and policymakers, including concerns about migration. For example, "One clear payoff is reducing the immigration pressure which will only increase if poverty and resource depletion go unchecked." The report notes that "these sorts of arguments can be made without reinforcing racist and isolationist strains in the American political culture" (33). Yet further on, the authors write that "Unfortunately, the specter of 'environmental refugees' driven by scarcity of resources and flooding American borders may be necessary to build the public support necessary for required increases in funding for population and sustainable development" (35).

Along with such arguments, it recommends using visual tools such as computerized mapping which overlays information about "population growth, resource depletion, overt conflict and refugee movements" (13), as well as adopting some of the campaign tools of the American Israel Political Action Committee (33).

The PGSI leadership was not blind to the contradictions inherent in using fear and alarmism to build support for liberal foreign policy goals, but its pragmatic pluralism

overrode moral qualms. Looking back on the period, Sechler told me that she was looking for ways of bringing people under the tent who could contribute to the project; she also wanted to include people who would be destructive if they remained on the outside. Although she does not believe in fear-mongering per se, she thought it was better "to voice fear and deal with it, deal with the unconscious, put the stuff out on the table...If you don't think about the dark side, it will come out. You can't keep people from thinking about these things." People are afraid of chaos, she noted, and though critical of Kaplan now, she said his writing was a "wake-up call," and was at least preferable to talking about throw weights.[8]

Sechler was also interested in creating a more open foreign policy, where Americans' own aspirations for themselves and their children were linked to the aspirations of people in other countries. U.S. foreign policy suffers from the belief that it can be done in secret, she remarked, that policymakers can "just work with the leaders and treat the Third World as a ghetto where you help organize markets and police forces...the more people who can relate to the Third World and democracy (with a small 'd'), the more pressure on Congress and the Senate."

Sechler's broad-tent approach was reflected in many aspects of PGSI's work and proved instrumental in shaping the Cairo consensus. Despite the caveats of feminist friends who warned of the Malthusian "environmental juggernaut," she funded the population work of mainstream environmental organizations in the hopes that they would come around to a women's agenda. She also held a controversial meeting on immigration, where she put immigrant rights and anti-immigrant advocates in the same room. To involve the security community, she brought Homer-Dixon into the tent and

also was the primary funder of the Woodrow Wilson Center's Environmental Change and Security Project (ECSP). She acknowledged that it may have been a mistake to include environment and security in PGSI's strategy, but she is not sure. She told me that you don't have to agree with everyone you fund.

By the mid-1990s Homer-Dixon thus found himself courted by powerful public and private players trying to broaden foreign policy issues and constituencies through their own strategies of circumscribed heterodoxy. While the goal of both Wirth and Sechler was to set more places at the table and get more people under the tent, this did not mean that all invited had equal voice, or that the guest list itself was not limited. This period was marked by a certain ideological confusion as women's rights, neo-Malthusianism and dark Kaplanesque visions of the Third World were woven together into the fabric of liberal American stewardship. There was method to the madness, however, as PGSI's own documents and funding priorities reveal.

That this was a special moment in U.S. foreign policy -- and perhaps a fleeting one -- gave an urgency to the tasks at hand. The initial name of "Fast Track" given to the Environment, Population and Security (EPS) Project suggests the pressure Homer-Dixon was under to deliver results; Sechler herself acknowledged that she probably drove Homer-Dixon and his assistants too hard. Part Three looks at the EPS and State Capacity projects, both of which were formulated in this unusual political moment. Yet the irony is that by the time they concluded, the moment had almost passed.

III. THE PEW PERIOD: THE EPS AND STATE CAPACITY PROJECTS

One ingredient in Homer-Dixon's success was his capacity for hard work. During the years 1994-96 he directed both the EPS and State Capacity projects. The former yielded over ten publications, of which he was the author or co-author of nine (see Appendix B); the latter produced only two in-depth case studies of China and Indonesia (though one on Bihar and one on Malawi are still in the pipeline). Although he was not the author of either the China or Indonesian studies, Homer-Dixon was heavily involved in their execution, and as of 2000 was planning to write the Bihar report himself.

PGSI supported both projects. It was the chief initiator of the first and helped Homer-Dixon get additional Rockefeller Foundation funding for the second. The goal of the two projects was to influence policy, hence the pressure on Homer-Dixon to deliver fast results. Despite all the aggravations, Homer-Dixon told me he would still do the 'policy stuff' again. In pragmatic terms alone, it helped him get funding.

The following two sections explore each of the projects in more depth, starting with EPS.

On the Fast Track: The EPS Project

"Quick and dirty" are the words Homer-Dixon used to describe the EPS project. (According to him, PGSI wanted it to be called the Project on Population, Environment and Security, but he insisted that environment go first.) Launched in July 1994 by PGSI, the project, based at Homer-Dixon's center in Toronto, was conducted in cooperation with the Program on Science and International Security of the American Association for the Advancement of Science (AAAS) in Washington, D.C. and the

Canadian Center for Global Security in Ottawa. AAAS was responsible for the production and dissemination of the project documents.

Of Homer-Dixon's three major projects, EPS was the one most directly geared towards policymakers. According to the initial work plan, the project's aim was "to produce a large volume of material as quickly as possible for use in current policy debates" (EPS 1994a:1). Indeed, "the value to policymakers of the anticipated product" was one of the three criteria used to determine the focus of research efforts (3). Along with country and thematic case studies, a briefing book on environmental security issues for policymakers and members of the media was part of the work plan. Project publications were sent out by AAAS to a list of over 1000 policymakers, representatives of the media, scholars, etc., another example of the report dissemination methods of strategic philanthropy (see Chapter Two).

The EPS project received a $300,000 grant from PGSI. At Homer-Dixon's request, Robert Kaplan was employed as a project consultant for $30,000, an indication of the close relationship between them. Kaplan's role was "to review all project materials for clarity and impact, to provide the Project with relevant information during his own travels and research, and to include relevant information from the Project in the book [The Ends of the Earth] he is currently writing on environment-conflict linkages" (EPS 1994b:3). A team of graduate students at the University of Toronto served as Homer-Dixon's research and project assistants as well as co-authors of the various case studies.

In May 1994 the PGSI held a meeting of its Advisory Board, at which both Timothy Wirth and Homer-Dixon made presentations. Wirth called for building new

constituencies for a new foreign policy, with increasing investments in areas "like population, the environment, migration and counter-narcotics" (PGSI 1994b:14). Homer-Dixon described the EPS project and received several critical comments. Cambridge University scholar Emma Rothschild encouraged him to examine how historically some societies have adapted to and overcome stresses; Judith Bruce of the Population Council urged him not to ignore states' roles in fostering insecurity through lack of adequate social investment and over-expenditure on defense. Demographer Michael Teitelbaum also asked Homer-Dixon "how he plans to tip-toe through the minefield of migration" (16). At the meeting concern surfaced once again about the dangers of a negative, crisis-driven approach to population versus a more positive vision of stewardship.

PGSI also put together a high-level Stewardship and Security steering committee which met to advise Homer-Dixon in November 1994 (PGSI 1994c). Among its members were Eileen Claussen, Senior Director for Global Environmental Affairs on the National Security Council, Kathleen McGinty, Director of the White House Office on Environmental Quality, and Enid Schoettle, National Intelligence Officer for Global and Multilateral Issues and a principal advisor to the Director of the CIA.[9] That Homer-Dixon had access to such high-level officials suggests both PGSI's clout within the foreign policy establishment and the weight given to Homer-Dixon's project within PGSI.

Another advisory team member was Jeff Wise, then director of the Aspen Institute's Environmental Security Policy Project and a former White House Fellow on environmental policy. Wise was the main link between the EPS project and the National

Security Council (NSC). Wise viewed the project's proposed briefing book as an important tool for members of the NSC's interagency working group on environmental security policy as well as senior government officials, key congressional staff, and speech writers. He wanted to work with Homer-Dixon to produce the book, using his access to CIA documents to add to Homer-Dixon's information. He anticipated both a classified and non-classified version. The NSC apparently wanted the material by the end of December 1994 to use in a communications and policy-making effort.

In the end, the briefing book (Homer-Dixon and Percival 1996) was not produced in conjunction with the NSC and did not appear until two years later, toward the conclusion of the project.[10] Nor did it contain strong policy recommendations of the type that Wise and others had originally envisioned. In responding to PGSI, Homer-Dixon justified the lack of policy recommendations in the briefing book on the basis that: (1) the goal of the EPS project was primarily providing accessible research and analysis to policymakers, who could then make their own informed judgments; (2) it would take considerable time and effort to develop recommendations that would reflect the complexity of relevant U.S., Canadian and inter-governmental policy institutions and the rapidly changing policy context; (3) recommendations would therefore suffer from vague generalizations and platitudes that would make them vulnerable to attack; and (4) most readers would only look at the recommendations section, without adequately examining the evidence. While Homer-Dixon's reluctance to offer specific policy prescriptions can be seen in the light of his concern for evidence and scholarly rigor, the briefing book itself is one of the weakest publications of project, especially its simplistic neo-Malthusian summaries of the case studies.

It is an open question whether the briefing book had much direct effect on policymakers, though a draft was given to the State Department speech writer who wrote Warren Christopher's April 1996 Stanford speech on environment and foreign policy. The EPS project also held policy briefings in Ottawa and Washington in May 1996. These included a briefing for the State Department's Policy Planning Staff and the Intelligence Community, an appearance at the State Department in the Important Issues Speakers Series, and a meeting with USAID (EPS 1996).

According to State Department interviewees, these briefings did not have a major impact there (although as we shall see in the next chapter, Homer-Dixon's ideas exercised considerable influence on the foreign policy establishment in both intentional and unintentional ways). Environmental security was not a particularly popular subject at the State Department, and its heyday in the administration was drawing to a close. In addition, in the summer of 1996 the Pew Charitable Trusts made the decision to wind down the PGSI and let go of Susan Sechler. Pew's abandonment of PGSI had partly to do with abortion politics. Because of PGSI's proactive stance on population issues, the foundation was starting to draw unwanted heat from the anti-abortion lobby. PGSI support had been vital in keeping the environmental security issue alive in the State Department. According to a senior population officer, people at the State Department were grateful that PGSI had provided the space to have a discussion of environmental security outside of a political context. Now that space was disappearing.

It was an advantage for the EPS project to commence in 1994, at the crest of the wave of interest in environmental security, but it was harder to ride that wave as it diminished in size, particularly in the absence of strong policy recommendations and

with the demise of PGSI. Although the State Capacity project was very different than EPS, it too faced similar limitations.

Challenges to the Fixed Frame: The State Capacity Project

In the project on Environmental Scarcities, State Capacity and Civil Violence, Homer-Dixon returned to his collaboration with Jeffrey Boutwell and George Rathjens at the American Academy of Arts and Sciences. This project was more of a direct successor to the first project on Environmental Change and Acute Conflict; like that project, it commissioned a series of case studies by area specialists though the number was smaller. Initially, the plan was for studies of China, Indonesia and India. As noted above, the India case study did not materialize as planned.

In a sense, this project was Homer-Dixon's least successful though best-funded; it received over $400,000, with roughly half coming from PGSI and half from the Rockefeller Foundation Population Sciences Program. At the Rockefeller Foundation the project was viewed as an 'outlier' in its population portfolio, which was focused more directly on family planning research and policy. It was the first grant made by the foundation officer Sarah Seims, and she took it on mainly due to encouragement from PGSI and the fact that the Rockefeller Foundation liked project co-sponsorship with other foundations. Rockefeller was disappointed with the results. Not only were there difficulties with the Indian study, but methodological problems with the Indonesian study and political constraints on the China study in terms of what could be said.

However, looked at from another standpoint, the project was more successful *intellectually* than the other two projects, since the area specialist authors of the

Indonesia (Barber 1997) and China (Economy 1997) case studies posed hard challenges to Homer-Dixon's theoretical framework. In addition, the collapse of the Indian study forced Homer-Dixon to do his own research in Bihar. It is in his account of his experiences there (The Ingenuity Gap 2000) that one sees the possibility of his moving beyond the environmental scarcity model (see previous chapter).[11]

The project proposal initially set forth four main hypotheses regarding the relationship between environmental scarcity and state capacity:

> - Environmental scarcity significantly increases demands on the state by requiring the construction and repair of infrastructure, the mitigation of environmentally related poverty in rural areas, and the provision of urban services to migrants from the impoverished countryside.

> - Environmental scarcity significantly decreases resources available to the state by interfering with general economic productivity.

> - Environmental scarcity therefore contributes to a widening gap between demands on the state and state resources. This gap strengthens certain elites while it weakens others; it reduces the state's managerial capacity and its bargaining and coercive power; and by increasing mass deprivation, it reduces state legitimacy.

> - These effects increase the risk of civil violence, including insurgency, ethnic conflict, riots, and potentially, civil war (State Capacity 1993:9).

Stressing the serious implications for international security, the proposal cites the possibility of China disintegrating in the face of environmental and population stresses or the evolution of aggressive authoritarian regimes which might launch military attacks against neighboring countries. "Should a number of developing countries evolve in this direction, they could eventually threaten the military and economic interests of rich countries" (8).

The project framework drew familiar criticism from scholars brought in to offer

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advice. At an October 1995 meeting at the Academy, for example, Lester Ross

questioned whether the rise in local violence in China was really due to environmental

scarcity or "a function of greater openness and political expression" in the country (State

Capacity 1995a:3). Vaclav Smil underlined the strength of the Chinese state, and

pointed out how China was paying much more attention to environmental issues than

Western countries at a comparable historical stage, a process which was enhanced by

foreign investment (3-4). In regards to India, Myron Weiner challenged the idea that

resources were scarce in Bihar, and cautioned against analyzing the state as a black box

and neglecting the role of NGOs and other important actors (5).

As in the previous projects, such critical comments did not make much of a dent

in Homer-Dixon's framework, and the authors of the case studies faced some determined

resistance on his part. In a 1995 memo to the case study authors, Chip Barber

(Indonesia), Elizabeth Economy (China), and Shaukat Hassan (India), Homer-Dixon

wrote that it was important that "we are singing from the same song sheet" in terms of

the definition of state capacity, although he also stated that "we are not prejudging the

results of this project. If you look hard and find that there are no clear links between

environmental scarcity and state capacity, then say so. None of the people running this

project would be distressed by such a result" (State Capacity 1995b).

However, a certain amount of distress was evidenced when the case studies

failed to conform to the framework. In comments on Elizabeth Economy's third draft of

the China study, Homer-Dixon expressed concern that much of her paper "argues in

support of a thesis different from the one we intend to investigate" in the project. He

was worried, for example, that she treated environmental stress as a dependent rather

than independent variable and that her causal chain was wrong. According to him, her causal chain ran from "[economic and political] Transition → Changes in state capacity → Problems with environmental management," whereas he was interested in the causal chain that ran from "Rising environmental scarcity X Transition → Reduced state capacity" (1995c:1-2).

Interestingly, in the same memo, Homer-Dixon included comments by Vaclav Smil, who was more sympathetic to Economy's analysis. Smil wrote:

> The real problem is to fit the findings into the prescribed mold, and on that account she cannot succeed because it is inherently impossible. None of the three big bad things she singles out -- income disparity, surplus labor, and corruption -- can be tied in any plausible causative manner to environmental pollution and degradation.

Homer-Dixon challenged Smil, however, telling Economy that the key independent variable was not pollution and degradation "but resource SCARCITY." He pointed to the work of Jack Goldstone[12], who shows convincingly that severe and rapidly increasing resource SCARCITY can contribute to income disparities and corruption. Surplus labor is often a function of rapid population growth; just ask most economists in sub-Saharan Africa or India. Vaclav is simply wrong here (1995c). Homer-Dixon was less critical of Barber's case study of Indonesia, though again in comments to the author he was concerned that it conform to the basic framework and incorporate his concept of ingenuity (State Capacity 1995d).

Partly as the result of this editorial process, the Indonesia and China case studies adopt elements of Homer-Dixon's framework, but also provide a much more in-depth and detailed rendering of the political economy of resource use in both places. They are more rigorous and less deterministic than the EPS case studies, partially due, no doubt,

to the fact that they are written by area specialists (see Barber 1997 and Economy 1997).

In addition to the publication and distribution of the two case studies, a final project briefing on China, Indonesia and India was held in May 1997 at the Woodrow Wilson Center, sponsored by the Environmental Change and Security Project (Woodrow Wilson Center 1997). In the list of participants were officials from the State Department, USAID, EPA, the Department of Defense, the National Intelligence Council and the National Security Council, along with representatives from foundations and NGOs.

Aside from this one policy briefing, it is unclear what, if any, policy impacts the project had. Unlike the EPS project, it did not set forth a simple model; as a final narrative report for the Rockefeller Foundation states, "the causal relationships between scarcities, state capacity, and civil violence were not fully evident in all three cases" (State Capacity 1998:4). Project successes were instead billed as the undertaking of substantial case studies, identifying and building links with "the growing communities of environmental specialists in China, Indonesia and India," and more nebulously helping "gain greater policy prominence for the importance of environmental scarcities as a public policy issue" (4). As Homer-Dixon himself remarked, the project produced no easy recommendations for policymakers.

The State Capacity project was the last of Homer-Dixon's major collaborative projects on environment and security. In a sense it marked the end of an era. In the second term of the Clinton administration, the openness toward new foreign policy goals diminished and environment and security started to lose its novelty value. In discussing

how much of what goes on in policy circles is moving from one fad to the next, Homer-Dixon told me that he had had his "fifteen minutes." Nevertheless, he felt he was successful in the sense that now it is almost uninteresting that environmental issues are part of the security agenda. He feels he was one contributor to an important shift in world view.

When asked what he would have done differently, he commented that he might have come up with a more conventional research design, for example, using counterfactuals, although this could have been bewildering. Process tracing, he emphasized, was important in the first stage of the work. In a 1999 International Studies Association (ISA) workshop assessing the state of the field,[13] he identified another problem as the failure to get down to the village level and talk to the people affected; he commented that we need to go down to the level where the pathologies are (personal notes from ISA Environment and Conflict Workshop; also see report of the meeting by Matthew and Dabelko 2000). He also spoke in favor of a plurality of research approaches.

This appeal to pluralism is also found in a paper he co-authored responding to criticism of his work. In order to deal with new research challenges, the authors encourage their colleagues to accept "a degree of methodological pluralism. The various methods available to us make up a diverse set of arrows in the quiver of the social scientist, and we should choose the arrow most likely to hit our target" (Schwartz, Deligiannis and Homer-Dixon 2001:291). But methodological pluralism is one thing, ideological as well as national, ethnic, and gender pluralism another.

In their comments on the ISA workshop, Dabelko and Matthew note the lack of

meaningful participation by developing country scholars and practitioners in environment and conflict research. "Although some efforts have been made in this direction, the research remains largely conducted by European and North American scholars and practitioners despite the overwhelming focus on Southern cases" (Dabelko and Matthew 2000:100).

But is this so much a shortcoming of environment and conflict research -- or a precondition for its success? More specifically, without circumscribing heterodoxy, would Homer-Dixon have got as far he did? What if he had listened more closely to the critical comments he received along the way regarding the need for more developing country participation, attention to political economy and causal complexity? Without his adherence to a rigid framework and alarmist warnings about impending threats, would he have grabbed the attention of Robert Kaplan and Al Gore and appealed to policymakers? Without the strong emphasis on the degradation narrative and other neo-Malthusian assumptions, would he have attracted funders like PGSI for whom highlighting population concerns was the central mission? Homer-Dixon seized the political moment, but the moment also seized him, rewarding him for not stepping out of bounds. His work was profoundly "funder-driven."

As this chapter reveals, agency clearly matters, not only the agency of the individual Homer-Dixon but of the powerful people and institutions that supported and shaped his work. Yet there were limits to this agency in terms of its ability to influence foreign policy. In the end, influencing policy at the macro level may be the least important impact of Homer-Dixon's work. In the concluding chapter, I examine the diffusion of his ideas in the context of U.S. government institutions and knowledge

communities and look to what may lie ahead in terms of their role in threat

representation and environmental surveillance and securitization.

Endnotes to Chapter Five

[1]. For example, in 1990 the University of California-Berkeley MacArthur Group on International Security Studies helped fund a workshop on "Global Resources and the Environment" co-sponsored by the Pacific Institute and the Energy and Resources Group at Berkeley. Homer-Dixon was a featured discussant. One of the goals of the workshop was to develop a common language for this new field of research which bridged the natural and social sciences (Pacific Institute 1990).

[2]. In addition to Boutwell, Homer-Dixon and Rathjens, participants included Dr. Robert Chen from Brown University's World Hunger Program, Dr. Stephen Lintner from the World Bank and various scholars and researchers from the U.S. and Canada. One prominent participant was Dr. Janet Welsh Brown of the World Resources Institute and editor of In the U.S. Interest (1990), previously cited in Chapter Three as one of the first post-Cold War publications to tie population, environment and conflict directly to U.S. national security. Noting how his interest in environmental conflict was coincident with Brown's and her colleague Jessica Mathews', Homer-Dixon told me how there was a kind of "simultaneous generation" of these ideas during the period, but he brought together environment and conflict independent of their influence.

[3]. These papers are "Water and Conflict" by Peter Gleick, "Environmental Stress and Conflicts in Africa: Case Studies of African International Drainage Basins" by Charles Okidi, "West Bank Water Resources and the Resolution of Conflict in the Middle East" by Miriam Lowi, "Environmental Change, Population Displacement, and Acute Conflict" by Astri Suhrke, "Bangladesh and Northeast India: Migration, Land Pressure, and Ethnic Conflict" by Sanjoy Hazarika, and "Environmental Conflicts and Indigenous Nations in Central America" by Bernard Nietschmann.

[4]. It may be that Strong's critical stance is one of the reasons the ECAC project did not have much influence on UNCED, although the project organizers had hoped it would.

[5]. One interviewee told the story of speaking with him at a party when he confided that the reason he could get along with women's movement people is that he treated them well. She remarked: "'Look around the room,' he told me, 'all these women have been hammered.' There was some courage in him."

[6]. As PCT's 1994 annual report noted, its team of professionals, consisting of lawyers, scientists and consultants, would "play a key role in generating many of the ideas behind the programs we support, participating with colleagues from the environmental community in defining the goals and objectives of these programs, designing their operating structures, hiring key staff and, in some cases, being directly involved in program execution" (cited in Tokar 1997:28).

[7]. For example, John Topping, Jr., head of the Climate Institute which funded Norman Myers' alarmist study of environmental refugees (Myers 1995), stressed the relationship

of land degradation and soil erosion to population movements. Another participant raised the question of whether "the fear of mass migrations, either internal or external, [could] be used as leverage to convince governments, multilateral agencies, and corporations to think in terms of sustainable development" (Pew Charitable Trusts 1993:6). Homer-Dixon was skeptical of the term environmental refugee and was concerned that it would take attention away from the root causes of poverty. In an interview, Topping told me there was much more interest in environmental refugees in European policy circles because of stronger fears about immigration, particularly from North Africa. To the extent that there was interest in the issue in the U.S., it came more from the population community than environmental groups.

[8]. Sechler believes there is great value in allowing civil society to articulate both its positive and negative thoughts and feelings in the same room, as it were. "It seems that no matter what is wrong with us, Americans will not go with the draconian mean-spirited option if they know that is what is entailed in various programs and policies unless they can convince themselves that the people who are affected are bad or lazy. But there is no way for them to know what policies mean on the ground unless issues are unpacked and the average citizen...feels like their concerns have been represented" (e-mail correspondence, 11/14/00).

[9]. Other members were Judith Bruce of the Population Council; Stephen Del Rosso of the Pew Charitable Trusts; John R. Dellenback, a Presbyterian Church leader; David Devlin-Foltz of PGSI, demographer Leobardo Estrada; PGSI Program Officer Susan Gibbs; political scientist Jack Goldstone; Robert Kaplan; Paul Kennedy; Robert Litwak of the Woodrow Wilson International Center for Scholars; Christopher Makins of the Aspen Institute; Georgetown University professor Theodore Moran; George Perkovich of the W. Alton Jones Foundation; Jeremy Rosner of the Carnegie Endowment for International Peace; Emma Rothschild; Susan Sechler; John Steinbruner of the Brookings Institution; Michael Teitelbaum; Barbara Torrey of the National Research Council; Thomas Wander from AAAS; and Jeff Wise at the Aspen Institute's Environmental Security Policy Project (PGSI 1994d). Interestingly, Homer-Dixon had recommended to Sechler in June that Joan Dunlop of the International Women's Health Coalition be part of the advisory team since she could help the project understand how its findings might be received or misperceived by women's groups. However, Dunlop did not join the team, and the project ended up having little contact with women's groups.

[10]. In addition to PGSI, the Rockefeller Brothers Fund provided funding for the briefing book.

[11]. Homer-Dixon also told me that he found the India study workshop held in Rajasthan in December 1995 to be one of the most stimulating. Here, he came face to face with critical Indian NGO activists such as Smitu Kothari from Lokayan in New Delhi. Kothari told me that he got very angry at the conference because although the project's empirical evidence was strong, the analysis left out any consideration of the role of the

capitalist economy. When people are alienated from their resource base, he remarked, they may take to violence or migration or political action, but the point is what alienates them from those resources in the first place?

[12.]. In a number of the memos to authors, Homer-Dixon cites Goldstone to legitimize his theory of the impact of population-induced scarcity on the state. Goldstone's writings clearly greatly influenced (and arguably greatly constrained) his view of the state. Goldstone, incidentally, was also the person from whom Homer-Dixon got the idea that the Chinese state was in danger of fragmenting.

[13.]. ISA Workshop on Environment, Population and Conflict Research, co-sponsored by the Environmental Change and Security Project and the University of California-Irvine Global Environmental Change and Human Security Project, Irvine, California, March 18-19, 2000.

CHAPTER SIX

Truths and Their Consequences:

Reflections on the Impact of Environmental Conflict Ideas

How is one to measure Homer-Dixon's impact, and the impact of environmental conflict ideas more generally, over the short and the long terms? This is the question I address in this concluding chapter. When I originally conceived of this thesis, I anticipated finding concrete policy outcomes, but over time I realized that the impact was likely to be more complex and diffuse than a simple project or program, especially as Homer-Dixon himself maintained a certain scholarly aloofness, steering away from policy recommendations.

A State Department briefing in 1996, shortly after the launching of Warren Christopher's much-heralded environmental initiative, provides a particularly revealing example of this. When asked what kinds of concrete, cost-effective policy steps could have been introduced 20 years ago in places like Chiapas to foster positive environmental change, Homer-Dixon's group[1] responded only with "population programs, improving local farming techniques, and tree-planting." They went on to describe these measures as "far more easily implemented than larger-scale structural change such as land reform" (State Department 1996a:4). Homer-Dixon admitted "a gap exists between what information he can produce and what the policymaker needs" (5).

However, many of the people I interviewed believed it was not just a question of an information gap, but rather that environmental conflict ideas did not have the

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necessary power to transform policy. Among the different reasons they offered were:

-- The environment has no agent to go after unlike terrorists or rogue states or even certain diseases. Who are you going to go after when the U.S. is the worst environmental abuser?

-- To the extent that the environmental conflict field moved, the mover was Vice President Gore, at least in his first term. He took a personal interest in it, but now (spring 2000) his personal interest is in running for president. If Gore loses the election, the arguments are not strong enough to withstand a Bush administration.

-- The foreign policy establishment cannot fit environmental conflict into their world picture, and now fascination with the environment is declining. People are also skeptical that investing in soil erosion will somehow reduce conflict. The core assessment of conflict is not likely to be environmental.

-- The State Department does not like issues that require long-term dedicated solutions; they want a quick fix to solve whatever is the current crisis.

-- Homer-Dixon's methodology was too linear and ruined the strength of predictiveness. The relationship between conflict and the environment is indirect and requires a different kind of conceptual model to get at this, one than engages people doing systems theory and complex adaptive theory.

However, I also heard more positive assessments. According to Army War College professor Kent Butts, Homer-Dixon's influence on policymakers was profound. It was directly related to the establishment of the CIA's Environmental Center and State Failure Task Force. These were in addition to Gore's decision to set up the MEDEA project, in which a select group of civilian scientists is working with the CIA to use

classified intelligence community data to monitor environmental degradation and crises (Richelson 1998). Butts also credits Homer-Dixon as being a major catalyst in bringing regional environmental issues to the fore.

Part of the difference in opinion may lie in the distinction between intentional and unintentional policy consequences. If one looks at environmental conflict ideas through the lens of strategic intelligibility (Ferguson 1990), one can consider the ways in which environmental conflict ideas may have failed to lead to any policy outcome directly identifiable with them, but nevertheless had other important policy and ideological effects that become clearer with the benefit of hindsight.

The purpose of this chapter is to consider both the intentional and unintentional consequences of Homer-Dixon's ideas in order to gain greater insight into processes of knowledge production, diffusion and function. Part One analyzes Homer-Dixon's impact through the concepts of boundary object and strategic text, with examples drawn primarily from key U.S. government institutions. Part Two examines the nature of the knowledge communities which formed around environmental conflict. Part Three is a more speculative exploration of the possible future impact of these ideas, in particular their relationship to evolving trends in threat representation and environmental surveillance and securitization. I conclude by addressing the role of the critical intellectual in challenging such a belief system such as Homer-Dixon's.

Whatever their thoughts about Homer-Dixon, most interviewees agreed that interest in environmental conflict could persist at a low level of activity, and perhaps grow stronger if political circumstances were to change. As one IR scholar put it, such ideas have been around for a long time. "Desire and scarcity -- you can trace it back to

Malthus and Hobbes. Geopolitics are organized around the same kind of arguments." In other words, the strategic value of scarcity is not likely to diminish any time soon.

I. REINSCRIBING ENVIRONMENTAL CONFLICT: INSTITUTIONAL EFFECTS

Timura (2001) argues that environmental conflict is a boundary object whose vagueness has allowed a wide variety of actors and institutions to enter the debate and/or use it for their own purposes. "At least one aspect of boundary objects is their ability to be appropriated by various institutions to serve already existing agendas," he notes (106). The participation of multiple players meanwhile increases the credibility of the discourse, helping to ensure its continued survival and expansion, not just in policy circles but elsewhere.

While the boundary object of environmental conflict may be vague (and environmental security even vaguer), one cannot say the same about Homer-Dixon's model which is a forthright specification of causal processes. Therein lies an important dimension of his influence: the specificity of his model, as well as his case study approach, gave the much-needed sheen of scientific rationality and scholarly rigor to an otherwise vague boundary object. As we shall see, this helps explain the way his work was frequently invoked by policymakers and commentators, even if their interest in environmental security was for quite different reasons. Funders like PGSI may have also viewed his causal logic as intrinsically appealing to policymakers for whom knowledge about cause and effect relationships is an important component of policy formation

(Goldstein and Keohane 1993).

In addition to helping legitimize and stabilize the boundary object of environmental conflict, Homer-Dixon's work, particularly his key articles in Scientific American and International Security, can also be seen as strategic texts which became more significant as they were reinscribed by others (Boland 2000, see Chapter One). Highlighted in Kaplan's "The Coming Anarchy," Homer-Dixon's 1991 International Security article (which Kaplan argued could mark the beginning of post-Cold War foreign policy) became a strategic text within a strategic text. This mutual reinforcement gave both texts added punch in the policy world, Homer-Dixon's scholarly approach a useful foil for Kaplan's more dramatic nightmarish and racially charged visions.

In official circles, the main element distilled from Homer-Dixon's work was the neo-Malthusian degradation narrative, phrased in his particular idiom of environmental or resource scarcity. The degradation narrative, then, is the strategic subtext, the hegemonic myth that is not only reinscribed in his work, but in the work of many others, as noted in Chapter Three. Homer-Dixon's particular contribution was giving the myth enough of scholarly legitimacy that it could pass muster in the corridors of power. The degradation narrative in turn provided an avenue through which population issues and actors could intersect with the emerging environmental security agenda and vice versa. It was vital to the creation and continuing operation of the Woodrow Wilson Center's Environmental Change and Security Project (ECSP), the focal point of the knowledge community that has formed around environmental security.

The following sections illustrate these processes through examining the reinscription and deployment of Homer-Dixon's ideas primarily in key U.S. government

institutions. The analysis is not intended as a catalogue of *all* effects in *all* relevant institutions; rather it teases out how the ideas interacted with and reinforced other institutional agendas.

The Clinton Administration: Something to Say

There is no question that Homer-Dixon's ideas provided the Clinton administration with "something to say" at a time when environmental issues were being incorporated into the foreign policy apparatus, largely at Al Gore's initiative. In 1993 the administration not only created Timothy Wirth's position of Under Secretary of State for Global Affairs in the State Department, but established a directorate and Senior Director post for Global Environmental Affairs at the National Security Council (NSC), the position of National Intelligence Officer for Global and Multilateral Issues at the National Intelligence Council (NIC), and a Deputy Undersecretary of Defense for Environmental Security in the Department of Defense (DOD).

According to Dabelko and Simmons (1997), late in 1993, following a briefing by Homer-Dixon, the NSC Global Environmental Affairs Directorate and the office of the Deputy Under Secretary of Defense for Environmental Security "began to incorporate environment and conflict ideas into their work" (135). In 1994 and 1995, the administration's National Security Strategy of Engagement and Enlargement, which is considered an important blueprint for foreign and defense policy, stated boldly in the preface that "Large-scale environmental degradation, exacerbated by rapid population growth, threatens to undermine political stability in many countries and regions" (White House 1995:47).

Certainly, from about 1994 through 1997, some mention of environmentally induced conflict seems de rigueur in official speeches and reports on the environment, whether emanating from the administration, State Department, intelligence community, or the Defense Department (see Environmental Change and Security Project Reports for these years.) Even if he is not mentioned by name, Homer-Dixon's ideas, often couched in language similar to his, are very much present.

For example, in 1994 Eileen Claussen, recently appointed NSC Senior Director for Global Environmental Affairs, delivered a speech which drew heavily on Homer-Dixon's notion of environmental scarcity. "Lack of access to productive agricultural lands combines with population growth to encourage migration to steep hillsides," she stated. "These hillsides are easily eroded, and after a few years fail to produce enough to support the migrants. The result is deepened poverty which then helps to fuel violence." Like Homer-Dixon, she went on to link resource scarcities to the insurgencies of the New People's Army in the Philippines and Sendero Luminoso in Peru (Claussen 1995:40-41).

While Homer-Dixon's ideas featured as strategic text, it is less clear how seriously they reflected the presenter's actual beliefs. As one veteran Washington observer told me, one must take these references with a grain of salt, since speech writers do not necessarily reflect the real views of policymakers. Themes are often chosen to fit a particular political moment. Claussen told me that she recalled getting somewhat involved with Homer-Dixon's material and giving this talk around the Cairo conference, when she 'did' population as well as the environment. However, her true interest was in multilateral environmental concerns.

One should also not discount the clueless factor. A senior Clinton administration official revealed that when the NSC first expanded to take on environmental issues in 1992, no one had a clue about them. Viewed in this way, Homer-Dixon's work filled a temporary policy vacuum by usefully linking population and environment to national security.

The rhetoric of environmental conflict also served more strategic and ideological purposes. As noted in the previous chapter, Homer-Dixon's ideas were particularly useful to Wirth at the State Department in building a broader constituency for the Cairo population conference. They also figured in Secretary of State Warren Christopher's 1996 initiative to improve the way environmental issues were incorporated in core foreign policy goals, which included the establishment of regional environmental hubs at embassies in Costa Rica, Uzbekistan, Ethiopia, Nepal, Jordan and Thailand.

Christopher's initiative identified a large variety of pressing environmental issues of strategic interest to the U.S., from climate change to ozone depletion to pollution; it also referred to resource scarcities and rapid population growth:

> Rapid population growth in various regions -- from the Mahgreb,
> to Sub-Saharan Africa, to South Asia, to Central America -- can combine
> with stagnant economies or diminished natural resources, and contribute
> to domestic political disorder, or to migration and international conflict.

In a country like Haiti, establishing political stability would involve "confronting environmental decline" (State Department 1996b:2).

In this, and other related State Department documents (e.g. State Department 1997a,b), one clearly sees the role of environmental conflict ideas in expanding the boundary object of environmental security. This process of expansion ultimately leads to an odd conflation: mentioned side by side, the problems of ozone depletion and Haitian

refugees are effectively given equal weight. One can observe this phenomenon in presentations of environmental threats/risks. Often in official documents the environmental risks posed by industrial accidents such as the Chernobyl explosion are placed side by side with the degradation narrative, with the effect of making poor peasants as threatening as nuclear disasters. For example, a 1999 Environmental Protection Agency (EPA) publication on environmental security states:

> Two well-known environmental disasters underscore the link between environmental degradation and threats to U.S. national interests:
> -- The Chernobyl nuclear power plant explosion and the tragic health effects that followed.
> -- The destruction of the forests of Haiti and the erosion of agricultural topsoil, contributing to untenable economic and living conditions and a flood of refugees fleeing to the United States (EPA 1999:1).

This expansion/conflation has several effects. Arguably, pointing the finger at poor refugees is part of a larger process of obfuscating the risks of large-scale technological hazards, to which the state has no effective response or in which it is heavily implicated (see Beck 1995). Barnett (2001) notes the additional problem of conflating risk with threat: "Environmental security in this sense represents the state's particularly highly politicized assessment of risk rather than any scientific account of the actual risks" (89).

One also cannot discount the racial dimension of the conflation, since the 'human face' put to environmental disaster becomes that of a dark-skinned peasant turned refugee. Although unintentional on his part, Homer-Dixon's negative depiction of migration fit well with the anti-immigrant political climate in Washington, D.C., which culminated in 1996 in a spate of legislation which severely restricted the civil rights of immigrants and curtailed their social benefits (Political Research Associates 2002). It is

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also important to remember that Homer-Dixon's work was supported by a foundation, the PGSI, which was seriously considering the *intentional* manipulation of fears around environmental refugees flooding American borders as part of a strategy to win public support for population and development assistance (see previous chapter).

After 1997 environmental issues in general started to wane as a priority area for the State Department due to a variety of factors, including "internal opposition, deeply ingrained and hard-to-change behavioral patterns, lack of congressional support, and the inability of anyone to articulate a clear set of foreign environmental policy goals" (Matthew 2000:107). Hopgood (1998) also argues that non-governmental environmental epistemic communities could not achieve much impact on the policy process because of the relative autonomy of the American state (Hopgood 1998). In addition, Gore's presidential ambitions made him less eager to take political risks.

Environmental conflict ideas concurrently diminished in significance in the administration, although one State Department official told me in the late 1990s that they might still have their political uses. It was much easier to do environmental diplomacy work, this official said, when the Defense Department and CIA beat the drums over things like water wars.

The Defense Department: Preventive Defense and Strategic Engagement

The Department of Defense (DOD) originally took up the banner of environmental security independent of environmental conflict issues, primarily in response to legislative and regulatory pressure in the late 1980s and early 1990s to clean up contaminated military bases and weapons installations (see Thomas 1997). Facing

possible budget cuts by the Clinton administration, the military was eager to attract and

keep clean-up resources in-house; its success is indicated by the fact that by 1995, the

DOD Environmental Security Office had a budget of $5 billion, almost equivalent to the

entire budget of the EPA (Nitze 1995).

Clean-up operations also developed an international dimension as part of a

strategy of strengthening ties to the militaries of newly democratic states. For example,

an interagency collaboration between the DOD, EPA and Department of Energy has

assisted the militaries of former Communist states in restoration of contaminated areas,

particularly in the Baltic and Arctic regions (see Goodman 1996).[2] Environmental

security, however, would come to include more than just toxic clean-up.

In the mid-1990s, in response to the challenges posed by political conflict and

humanitarian emergencies in places like Somalia and Sudan, the DOD introduced the

doctrine of "preventive defense" which embraced environmental conflict ideas. In

remarks to the National Defense University in 1996, Deputy Undersecretary of Defense

for Environmental Security, Sherri Wasserman Goodman, underlined the importance of

preventive defense, which includes understanding the causes of conflict and instability,

providing early warning of potential crises, and acting "well before a crisis to avoid

costly military interventions." Clearly echoing Homer-Dixon, she emphasized the role

of environmental degradation and scarcity in generating conflict:

> Scarcity of renewable resources such as water, forests, cropland,
> and fish stocks occur from degradation and depletion of resources,
> overconsumption and overuse of resources, and/or inequitable
> distribution of resources. Often these causes of scarcity combine to
> exacerbate the scarcity's impact. Environmental scarcities can interact
> with political, economic, social and cultural factors to cause instability
> and conflict (Goodman 1996:2).

In a chapter on the environment, the influential 1997 Strategic Assessment of the Institute for National Strategic Studies (INSS) repeated Goodman's words almost verbatim (INSS 1997:221). The report also described Haiti and Chiapas, where instability is "exacerbated by land scarcity, soil erosion and deforestation," as the two potential flashpoints of most concern to the U.S. since they are closest to American borders (225).

Whether these references to Homer-Dixon's work are more rhetorical bows than serious indicators of policy is a debatable question. According to an officer in the DOD's Environmental Security Office whom I interviewed in 1999, Homer-Dixon's work was useful to "bright light" the environmental degradation issue, but his model wasn't being used "anywhere around here." Except for water issues in the Middle East, this officer said, there are not clear-cut cases of environmental scarcity leading to conflict. He described Homer-Dixon's analysis, with its focus on scarcity, as way too far out to the right![3]

It is worth noting, however, that the DOD Environmental Security Office was a major player in the NATO CCMS study which shares many of the same assumptions as Homer-Dixon (see Chapter Four). Army War College professor Kent Butts told me that Homer-Dixon's basic message that environmental degradation can trigger conflict had a major impact on policymakers, despite the academic naysayers.

Notwithstanding these differences of opinion, environmental conflict ideas have proved useful to DOD's strategy of building bridges to foreign militaries as well as civilian institutions in the South. For example, in an April 2000 ECSP workshop, General Anthony Zinni, Commander in Chief of the U.S. Central Command, which

covers 25 countries from the Horn of Africa to the Middle East and Central Asia, spoke

of environmental threats which potentially threaten regional stability. While he

emphasized water scarcity issues, he also remarked:

> Depletion of resources and loss of biodiversity can cause soil
> degradation. This, in turn, can lead to migration to the cities, which
> suffer from urban explosion and become hotbeds for extremism.
> Population growth in Africa and in the Arabian Peninsula is also a great
> concern, as these regions may not be able to sustain such a high
> demographic density (U.S. Central Command 2000:190).

Such concerns play a role as both context and pretext for U.S. military outreach

not only to other militaries but to non-governmental organizations. In the words of

Zinni's colleague, General Stephen Johnson, present at the same meeting, "The concept

of environmental security...gives the military the chance to interact and learn from

environmental experts and NGO representatives. Environmental security is an

engagement tool, one which has a win-win outcome" (190-191).[4]

According to Kent Butts, because of their proven effectiveness, these kinds of

outreach strategies continue today as security cooperation under the Bush administration.

Environmental security is a benign subject, Butts told me, involving issues like

population and health; it is a way to get down to the practitioners in the field.

Environmental security has been employed as a way to re-engage with India, and it has

proved a particularly useful means to get access to the militaries of the Central Asian

states. Butts was planning a Central Command environmental security conference in the

Persian Gulf in September 2002 as a means to promote communication and cooperation

between the militaries of this strategically important region and the U.S.

In Central America, according to Butts, the DOD and the Southern Command

are working to get militaries involved in reforestation efforts and the development of a

protected biological corridor. Butts promotes the idea of civilian-defense partnerships,

in which the U.S. military encourages national militaries to engage in environmental

projects in cooperation with NGOs and other civilian interests as a way of strengthening

the transition to democracy (also see Butts 1998:102). Butts spoke about the

Philippines, where with the fall of Marcos, opportunities opened for using the military

for positive environmental ends such as reforestation. As part of a larger development

package, environmental aid is also a component of the current U.S. anti-terrorism

program in the Philippines, and environmental security a major aspect of the Central

Command's work in Afghanistan. The DOD also has biodiversity and conservation

projects in 15 countries in Africa (U.S. Army War College 2000). Butts mentioned the

case of Malawi, where game poachers were better armed than wildlife preserve guards,

and the U.S.-equipped Malawian army provided the latter with semi-automatic weapons

and anti-poacher training.

By focusing on the security aspects of population and environmental

degradation in the South, then, environmental conflict ideas have enlarged the military's

concept of environmental security, not just definitionally but geographically and

operationally.

The Intelligence Community: Rhetoric, Rationale and Warning Signs

In the intelligence community, environmental conflict ideas helped fill the

vacuum left by the demise of the Soviet Union. During the Cold War 50-60 percent of

the CIA's resources were directed toward the Soviet Union; by 1993 the share had

shrunk to 13 percent. To justify continued high levels of budgetary support, the first

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post-Cold War Director of Central Intelligence (DCI) James Woolsey emphasized new threats to security, arguing that the U.S. now lived "in a jungle filled with a bewildering variety of poisonous snakes" (cited in Johnson 1996:41). In addition, the CIA encouraged more government agencies and policymakers to become consumers of its intelligence, and looked for new missions for its expensive satellite surveillance systems, which had been trained primarily on the Soviet Union (Twentieth Century Fund 1996).

It is within this context that environmental matters began to figure more prominently in the intelligence community in the 1990s.[5] In a familiar pattern, high-ranking intelligence officials made Homer-Dixonesque remarks about population growth, environmental degradation and conflict in speeches on the environment (e.g., see DCI Speech 1996). A Wall Street Journal article on the new 'greenpolitik' of the intelligence community emphasized environmental conflict and referred to Homer-Dixon specifically in regard to China (Marcus and Brauchli 1997). Rhetoric aside, there were also a number of institutional effects of these beliefs.

First, environmental conflict ideas have served as a justification for the maintenance of expensive satellite surveillance systems, which cost around $1 billion each, with 12 typically operating at one time (Broad 1995). In 1996 DCI John Deutch linked satellite surveillance directly to the degradation narrative and threat of environmentally-induced conflict:

> Environmental degradation, encroaching deserts, erosion, and overfarming destroy vast tracts of arable land. This forces people from their homes and creates tensions between ethnic and political groups as competition for scarce resources increases. There is an essential connection between environmental degradation, population growth, and poverty that regional analysts must take into account.
> National reconnaissance systems that track the movement of tanks through the desert, can, at the same time, track the movement of the

desert itself, see the sand closing in on formerly productive fields or hillsides laid bare by deforestation and erosion. Satellite systems allow us to quickly assess the magnitude and severity of damage. Adding this environmental dimension to alert policymakers to traditional political, economic, and military analysis enhances our ability to alert policymakers to potential instability, conflict or human disaster and to identify situations which may draw in American involvement (DCI Speech 1996:1).

Second, concern about the potential for environmental conflict was also an important factor behind Gore's move to establish the DCI Environmental Center (now called the Environmental and Societal Issues Center) to serve as a focal point for environmental issues within the intelligence community. As noted in Chapter Three, the Environmental Center hosted a conference on environmental flashpoints in 1997, in which environmental conflict ideas figured prominently in the case studies. In 1999 the Center was working on a quantitative forecasting model using political, economic, environmental and demographic data to try to predict where conflict might break out in the future.

Third, environmental conflict ideas provided a possible avenue for the intelligence community, as for the military, to engage with nongovernmental experts and organizations. As one intelligence analyst told me, in the case of environmental issues, information sources are "way outside" the community, and contact with knowledgeable academics, NGOs and quasi-governmental agencies is beneficial. According to journalist Steven Greenhouse, in Africa, where the CIA cut back on its intelligence presence during the Clinton administration, relief workers especially were considered "a trove of information" (Greenhouse 1995:A6).[6]

One of the express charges of the National Intelligence Council (NIC), described by the Los Angeles Times as "the most influential analytic arm" of the U.S. intelligence

community (Wright 2000:1), is drawing on "nongovernmental experts in academia and the private sector to bring in fresh perspectives and analytic methods to enhance the intelligence process" (CIA 2002). As noted in the last chapter, Enid Schoettle, NIC Officer for Global and Multilateral Issues in the Clinton Administration, was a member of the PGSI Stewardship and Security steering committee which advised Homer-Dixon. She was also a leading force in the production of Global Trends 2015: A Dialogue About the Future with Nongovernment Experts (NIC 2000b), which is the largest project the NIC has done with outside engagement (Loeb 2000). Demographics and the environment are at the top of the report's list of seven "key drivers" that will shape the future.

Fourth, environmental conflict ideas provide a useful interface between environmental scientists and the intelligence community in the development of early warning systems. For example, Alan Hammond of the World Resources Institute and British security scholar Gwyn Prins have been working on a conflict prediction model utilizing environmental indicators for possible use by both the CIA and the British defense intelligence agency (DERA). Hammond told me that the model, which uses land-based indicators such as soil fertility and population projections, would identify the critical threshold at which social disruption would likely occur. This kind of collaboration between environmental scientists and intelligence agencies, which raises both serious ethical and epistemic concerns[7], may be one of the most lasting impacts of environmental conflict ideas.

In sum, environmental conflict ideas have served multiple objectives within the intelligence community, supporting the establishment of the Environmental Center,

serving as a rationale for continuing expenditures on satellite surveillance, facilitating engagement with NGOs and academics, and providing an interface between environmental scientists and intelligence agencies in the design of early warning systems.

USAID: Agency within the Agency

Although Homer-Dixon told me that he felt USAID was one of the institutions where he had the most influence, others remarked that his influence was limited mainly to the speeches and writings of (former) USAID Director Brian Atwood, who also borrowed heavily from Kaplan in painting horrific visions of a degraded, violent and overpopulated Third World.[8] However, Homer-Dixon may be right if one takes a longer-range view of USAID activities. By legitimizing neo-Malthusian views of resource scarcity and violence, Homer-Dixon provided USAID with a useful way to link population to security prerogatives and institutions. Matthew (2000) notes how Homer-Dixon's research, by highlighting population issues, was consistent with USAID's agenda.

It would be wrong to view USAID, and especially its population office, as homogeneously neo-Malthusian, however. There was, and continues to be, a tension between those at the agency who view the population issue within a reproductive rights/reproductive health perspective and those who see population growth as a key "strategic threat" that "consumes all other economic gains, drives environmental damage, exacerbates poverty, and impedes democratic governance" (USAID 1993:7), and thus demands a strong results-driven family planning response. After the 1994 ICPD this

division became even more pronounced at USAID's Population, Health and Nutrition Office (PHN). In my interviews I was told by several people at USAID that reproductive health now had the upperhand in PHN and that environmental security ideas were not very popular.

There was a notable exception to this trend, an interesting example of specific 'agency within the agency.' Joanne Grossi, a Senior Technical Adviser and head of AID's Population and Environment Initiative, began to fund the Woodrow Wilson Center's ECSP when Pew funds dried up in 1997. Grossi stepped in as PGSI's Susan Sechler stepped out, both women, then, playing a vital role in sustaining the environmental security enterprise. If the ECSP had collapsed in 1997 from lack of funding, it is questionable whether the environmental security field would have continued to grow. In addition, Grossi, an ardent neo-Malthusian,[9] helped to keep population central to the ECSP mission.

When I interviewed Grossi in 1999, PHN's contribution to the ECSP had risen from $75,000 to $600,000. She explained that the symmetry was beneficial; while USAID money helped the ECSP improve its reputation and attract more government officials to its events, the ECSP helped USAID get more of an audience for population issues. She did not foresee any concrete policy changes emerging from the collaboration, but instead more in the way of "intangibles" like the chance to dialogue. She remarked that some people at USAID hoped that having the DOD, CIA, Congressional staffers, etc. in the same room at the Wilson Center would help them to see USAID differently and impact how Congress feels about the agency. In terms of environmental security, the ECSP "was one of the only games in town."

In addition to the "intangibles," there also appear to be more tangible programmatic consequences of USAID's involvement in the environment and security field. In 1996 the USAID-supported University of Michigan Population Fellows Program, which places early career population professionals in developing country institutions, established a new Population, Environmental Change and Security (PECS) initiative in collaboration with the ECSP. The initiative's goal is to link the insights of fellows working in population-environment projects to ECSP's experience in facilitating policy-level dialogue. "The result is a unique interdisciplinary forum for examining demographic and environmental roots of conflict and exploring program and policy options" (England 1999:74). In 1999 the focus was on migration, particularly the relationship of refugee flows and urbanization to environmental degradation and insecurity.

As a result of this initiative, joint population-environment projects undertaken by family planning, conservation and development NGOs began to receive significant visibility in ECSP Reports. Despite a professed commitment to communities identifying their own health and environmental needs, the main priority of many of these projects is to reduce population growth through increased uptake of family planning. A Michigan Fellows report contains this telling "lesson learned:"

> In both Ecuador and Madagascar the concept of population was somewhat problematic. It was more difficult for participants to list quickly the activities that can be described as "population" compared to listing health or environment activities. In general, people are more comfortable discussing population activities under the umbrella category of health or reproductive health for political, cultural, and religious reasons. This preference seems a reasonable and strategic approach but could be a cause for concern if health does not include population-related needs and activities. In an integrated/linked population, health and environment program, there must be commitment and "intentionality" to

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ultimately undertake population activities, including family planning (Caudill 2000:73).

In the case of the Ecuador and Madagascar projects, population is integrated into almost all project activities, so that training in areas like guinea pig breeding, soil conservation measures, and improved cultivation practices has a family planning component.

Ideologically, population-environment projects reinforce the message that it is the population growth *and* agricultural practices of the local people themselves that cause environmental degradation. The problematic nature of these projects will be explored further in Part Three; here the important point is to note USAID's role in linking them to security concerns through the ECSP. Recently, USAID interest in environmental security has extended beyond the population program. Together with the MacArthur Foundation, USAID is funding a project undertaken by the African Center for Technology Studies (ACTS) in Nairobi, Kenya on "Ecological Sources of Conflict in Sub-Saharan Africa." In addition to assessing the extent to which natural resource scarcity and ecological stress contribute to conflict, the project's goal is "to promote dialogue between environmental agencies and those engaged in conflict prevention and management" (ACTS 2002).

Although the proposal draws specifically on Homer-Dixon (ACTS 2000), the project has a more complex and nuanced approach. As an international consultant told me, the African researchers involved, as well as many of the USAID personnel, do not accept Homer-Dixon's causal framework. However, he recounted the visit of one USAID official, carrying a copy of Homer-Dixon and Jessica Blitt's Ecoviolence under his arm, who was keen to set up a project in East Africa to deal with violent conflict between pastoralists, supposedly as the result of natural resource scarcities.

This example points to the need to monitor future developments at USAID in regard to conflict prevention strategies. In May 2001, as part of the agency's reorganization under the Bush administration, USAID announced that "conflict prevention and developmental relief" are one of the four new pillars of its work (USAID 2001). This intensified focus on conflict prevention could re-open space for environmental conflict ideas to percolate into the development arena.

These examples from the State Department, DOD, intelligence community and USAID illustrate how environmental conflict ideas had a variety of ideological and institutional effects in U.S. government agencies, if not concrete policy outcomes. The following section looks briefly at their impact on institutions outside the U.S.

Bilateral and Multilateral Institutions

On the international level, environmental conflict ideas have percolated within a number of institutions[10], though their precise impact is hard to gauge. The German government's Federal Ministry for the Environment, Nature Conservation and Nuclear Safety has been one of the most active players internationally; Kurt Lietzmann from the Ministry was one of the instigators and directors of the NATO CCMS study (Lietzmann and Vest 1999). Several environmental researchers I interviewed noted how the German approach toward environmental security differed from that of the Americans, with more emphasis on human security issues and multilateral cooperation, and less on military engagement. However, in terms of the analysis of environmental conflict, the German approach in the NATO CCMS study has much in common with Homer-Dixon's analysis (see Chapter Four).

The process of institutionalizing environmental security in European and multilateral institutions is reported to be slow. In 1999, German environmental researcher Alexander Carius (who was involved in the NATO CCMS study) told a meeting at the Woodrow Wilson Center that in Europe such efforts "remain in their infancy, in particular efforts to address environment and conflict linkages," partly because those linkages are still imprecise (Carius and Lietzmann 2000:169). The possible exception is the U.K. where the Blair government has established an Environmental Security Team in the Foreign and Commonwealth Office's Environment Policy Department, and the Ministry of Defense document "Future Strategic Context of Defense" embraces resource scarcity arguments (British Ministry of Defense 2001).

Another reason for the slow absorption of environmental conflict ideas is that they have faced more opposition on the international level than within the U.S. For example, the UNEP initially proved very receptive to environmental conflict ideas as part of a larger strategy of positioning itself in a conflict prevention role. In 1999 UNEP produced a study on "Environmental Conditions, Resources and Conflicts" which paraphrases Homer-Dixon in many places (Schwartz and Singh 1999). (Schwartz, in fact, was then at the University of Toronto and has worked with Homer-Dixon).

According to Kurt Lietzmann, the G-77 countries ultimately blocked efforts by UNEP and other international intergovernmental organizations to institutionalize environmental security because they opposed "expanding the mandate of UN organizations to intervene in advance of perceived environmental conflicts" (Carius and Lietzmann 2000:169). One such proposed intervention was a UN "green helmets" force to respond to environmental disasters (Mendez 2002:321).

Today, Carius is part of an initiative to bring about greater involvement of Southern governmental and non-governmental institutions in environmental conflict discussions. As the director of the Adelphi Research organization in Berlin, Carius has joined with Alexander Lopez of the Costa Rican NGO, Foreign Service Foundation for Peace and Democracy, and the ECSP to form the Environment, Development and Sustainable Peace Initiative (EDSP). This initiative recognizes a number of the problems with past Northern conceptualizations of environmental conflict, including Northern researchers' emphasis on "worst-case scenarios without incorporating a Southern perspective," lack of attention to development concerns, and the focus on governments rather than NGOs and grassroots communities (Mendez 2002:322).

At the recent World Summit for Sustainable Development in South Africa, the EDSP sponsored a roundtable billed as

> an international effort to bridge the gap between Northern and Southern perspectives...Current efforts to translate the environment, population, and conflict debates into a positive, practical policy framework for environmental cooperation and sustainable peace have not enjoyed broad success. More importantly, these efforts have failed to engage a broad community of stakeholders, particularly in the global South. Fostering new efforts to bridge both the knowledge and policy gaps between the South and North is a critical step in the path to sustaining environment and sustaining peace (EDSP 2002).

The roundtable was also presented as a way to build networks between civil society groups, government officials and think tanks working on these issues.

Whether or not this attempt is successful, it indicates that environmental conflict ideas are still in circulation in policy circles, even if not deeply embedded in policy institutions. The perceived challenge is to get more Southern stakeholders into the debate. This raises two central questions: First, is the debate *worth* having, or would it

be better to break out the environmental conflict box altogether, given the many perils of linking the environment to security and the deep neo-Malthusian assumptions that are still the dominant approach? Second, will the attempt to get more Southern stakeholders to the table end up being another example of circumscribed heterodoxy -- which stakeholders from the South will be included, and even if more critical voices are allowed, will their names legitimize the project while their views are essentially ignored? It will be ironic indeed if environmental conflict ideas get a new lease on life by appearing to come "from the South." However, looking on the more optimistic side, perhaps Southern perspectives will force a radical rethinking of the paradigm or at least weaken it substantially.

Ultimately, the staying power of environmental conflict ideas is not only dependent on their intentional, as well as unintentional, impacts on policy institutions, but the nature of the knowledge communities which have formed around them. This is the subject of Part Two.

II: IN SEARCH OF A KNOWLEDGE FORMATION

When I attended the International Studies Association's 1999 annual meeting in Washington, D.C., I met a newly minted PhD in the environmental security field who told me that "We should get together and form a little epistemic community." Facetiousness aside, this comment illustrates just how much currency the concept of epistemic community has in such quarters.

Yet the question remains as to whether an epistemic community actually exists in the environment and security field. As IR scholar Ronnie Lipschutz told me, it makes

more sense to talk of an episteme than an epistemic community. The latter implies a group of people who organize around a specific set of issues to impact policy, whereas an episteme is more inchoate -- people are more loosely organized around shared ideas.

Given the vagueness of the boundary object of environmental security, and the diversity and multitude of possible policy objectives contained therein, episteme rather than epistemic community does seem a better fit. However, in its heyday in the early to mid-1990s, environmental security attracted a significant number of scholars and research institutes, both national and international, many with direct ties to policymakers. Among these are the International Peace Research Institute (PRIO) in Norway which has done considerable work in the field; the Pacific Institute in California, which has focused mainly on water conflict issues; Ecologic (Center for International and European Environmental Research) in Berlin which played a major role in conceptualizing and writing the NATO CCMS environment and security study; the Environment and Conflict Project of the Swiss Peace Foundation; and the Global Environmental Change and Human Security Project (GECHS), based in Canada. Researchers from these institutes met at conferences, participated in joint projects, and contributed to edited volumes, but their affinity was based more on the aim of interrogating and defining the parameters of environmental security (and in more material terms, attracting research funds), rather than on advocating a specific policy change in a specific institution.

Yet the concept of episteme alone does not adequately embody the nature of the knowledge communities which formed around environmental security. In particular, it leaves out the matter of strategic philanthropy and intentionality. In the last chapter, we

saw how Homer-Dixon's own work was shaped by a proactive funder-driven agenda which privileged population issues. The Pew Global Stewardship Initiative was not only the major funder of his work, but of the Woodrow Wilson Center's ECSP until the USAID Office of Population took over that role in 1997. Today, the ECSP also receives funding from an additional population-oriented foundation, the David and Lucile Packard Foundation.

The financial support of population interests has helped make environmental conflict, with its emphasis on the degradation narrative, a dominant theme of the ECSP. In the early years especially, Homer-Dixon's work is a major point of reference, and today population issues still occupy pride of place in the Environmental Change and Security Project Report (see Issue 8, 2002). One has to wonder how things might have worked out differently, if, for example, the funders had been more concerned with the role of U.S. carbon emissions in global climate change than with population growth in the Third World.

The intentionality behind the creation of the ECSP does not just have to do with the privileging of population, but with the endeavor to provide a physical and textual space where scholars, researchers and policymakers could meet. While this kind of interface institution is not unique, what distinguishes the ECSP is the extent to which it has proactively come to define the boundaries of the environmental security field and keep it alive, even in the face of major political transition in Washington, D.C.

What are the implications of this for understanding the knowledge formations around environmental security? If the concept of epistemic community does not fit, are the notions of issue network and discourse coalition (see Chapter One) more relevant?

Issue Networks and the Role of Consensus

The more diffuse nature of issue networks, and the fact that although their members may share a knowledge base, they do not necessarily agree, more accurately describes those involved in the environment and security field. However, it is important not to neglect the role of consensus in issue networks.

As Halfon (1999) notes, consensus is less an absolute agreement than a process of continual negotiation, as "complex, multiple and contradictory" as the issue network itself. "A network facilitates the process of consensus production because it is both flexible enough to admit diversity yet disciplining" (2). In the case of environmental security, Homer-Dixon's ideas, whether disputed or not, were an important part of the consensus because there was general agreement that they *mattered*. In fact they mattered so much that they were the principle subject of debate in the 1996 and 2000 issues of the Environmental Change and Security Project Report. It is useful to think of consensus here in terms of consensus over the *frame of reference*. Ironically, constrained by this frame of reference, critics within the network can end up reinforcing it by the very act of criticizing it.

Another advantage of the issue network approach is that it acknowledges the possibility of multiple nodes. In the case of environmental security, some nodes are more magnetic than others, however. Thus, the ECSP, by virtue of its funding, access to U.S. policymakers, and effective outreach, became a more powerful node than other institutions, with more staying power.

Even if a network is flexible enough to admit diversity of views, it is also important not to forget the disparities in power between its members. The role of

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strategic philanthropy is critical in this regard, since private foundations play such an important role in policy-oriented research in the U.S. (Prewitt 2001). In her study of the Rockefeller Foundation, Kay (1993) notes the "negative space" outside the hegemonic consensus where those with less fashionable views receive less support (or in some cases lose it). Even if we locate that "negative space" within, not outside, the network consensus, its inhabitants still have less power in terms of access to funding and the connections to policymakers that often accompanies it. For example, critics may receive funding, perhaps even from the same sources, but at much lower levels than those who express the accepted, dominant view. Here, too, the politics of circumscribed heterodoxy operates; the consensus is strengthened by its apparent openness to different points of view, but since those holding critical views have less power and funds, the consensus is not fundamentally challenged. In the case of environmental conflict, the initial lack of scholarly critical analysis of Homer-Dixon's views may reflect, at least in part, fear of being consigned to the "negative space," with consequences for one's access to funding and professional career. Silence is often a strategic choice, especially in the face of a rising star like Homer-Dixon, who after all was dining with Al Gore. Criticism ultimately became more acceptable, but largely within the bounds of circumscribed heterodoxy. The debate was mainly waged between Western IR male scholars, and with a few exceptions, there was little serious challenge to the underlying hegemonic myth of the degradation narrative.

This points to the importance of examining the internal politics and economics of issue networks and the role of strategic philanthropy in privileging certain actors and understandings over others. This privileging not only has relevance to the kind of

knowledge which is produced, but to the producer's ability to appeal and have access to policymakers.

Discourse Coalition or Discourse Tapping?

It is also worthwhile to consider the concept of discourse coalition in relation to environmental conflict ideas, especially if one moves beyond the more scholarly actors in the field. According to Hajer (1995, see Chapter One), discourse coalitions can be comprised of diverse actors -- scientists, politicians, activists, members of the media -- who employ a similar story line as they engage in environmental politics without necessarily ever meeting or sharing an explicit political strategy. Discourse coalitions are successful to the extent that a particular discourse becomes dominant and embedded in specific institutions.

The degradation narrative can be viewed as one such story line. Certainly, a diverse range of actors have employed it, from top government officials to population propagandists, and it has enjoyed considerable prominence in academic, policy and media circles. To the extent that environmental conflict ideas have been institutionally embedded, so has the degradation narrative. But does this necessarily mean an actual discourse coalition has formed around this particular story line? Is coalition too strong a term, implying more unity than actually exists?

Rather than the idea of a coalition, it is more useful to think of a sort of 'discourse tapping' process in which various actors make use of a particular discourse or story line for strategic and ideological ends, and not necessarily with institutionalization as the benchmark of success. The degradation narrative and environmental conflict ideas were

used by many disparate actors for disparate ends, and some actors tapped them more than others.

The population community provides a particularly illuminating example of this. While population-oriented foundation funding was vital to the production and spread of environmental conflict ideas, population NGOs have largely been reluctant to take them up, except when the ideas can be deployed in the service of some other objective. This reluctance stems from the fact that many people in the field view linking population to security as undermining the Cairo framework of refocusing population policy towards reproductive health and women's empowerment.

As one representative of a prominent population NGO told me, at first environment and security looked like it was going to be a big deal, but it hasn't had much sticking power because it is problematic. "What alliances would we make if we used it?" the representative said. "How would it affect our relationship with women's groups and environmental groups? If there are alliances to be made with conservative groups, what values does one place at risk? The population community does look for common ground with conservatives in Congress, but only if the core values of Cairo are not compromised." Nevertheless, this same person was considering doing a publication on environment and security if it would be useful in getting policymakers to see the importance of family planning.

For similar reasons, a number of population groups have tapped into the environmental conflict discourse. Population Action International featured Homer-Dixon's ideas in its 1997 publication "Why Population Matters," designed to make the demographic case for family planning assistance (Engelman 1997). A 1999 issue of

Population Reports on "Why Family Planning Matters?," published by the USAID-funded Population Information Program at Johns Hopkins University, contains a section on resource conflicts that draws directly on Homer-Dixon (Population Information Program 1999).

The RAND Corporation's Population Matters series did a report in 2000 on "The Security Dynamics of Demographic Factors," again drawing on Homer-Dixon's work, financed by the U.S. Army and major population funders -- the Hewlitt, Packard and Rockefeller foundations. This publication links the need for more U.S. family planning assistance to governments "that wish to take the direct approach of reducing their fertility rates outright" to the army's need for technologies such as unmanned aerial surveillance vehicles and better body armor to fight in overcrowded urban areas of the Third World (Nichiporuk 2000:51-52).

More recently, a full page advertisement in the New York Times (6/19/02:A15) by the Population Institute attributes resource depletion, environmental degradation and civil unrest (as well as hunger and grinding poverty) to poor women's unintended pregnancies.

The two population projects which tapped most heavily into environmental conflict ideas were the Population Reference Bureau's (PRB) joint project with the Center for Strategic and International Studies (CSIS) in Washington, D.C. on "Population and National Interests" (CSIS 1996) and the Rockefeller Foundation's lobbying publication High Stakes (Rockefeller Foundation 1997). The PRB/CSIS publication presents family planning as preventive diplomacy to mitigate a whole host of threats posed by population pressure, including conflict caused by resource scarcity. It

emphasizes the connection between resource scarcity and migration, especially from Haiti,[11] and asserts that the U.S. must regain control over its borders. PGSI instigated the collaboration between the two agencies; PRB was supposed to influence CSIS, but the context remained very much a security one. This led to a certain amount of disenchantment on the part of the PRB.

One of the PRB participants, Alex de Sherbinin, told me it was difficult to get the security people involved to move beyond the concept of the national interest to embrace development issues. The development people, meanwhile, were "twisting and turning" to relate to the security people but lost something in the process. He ended up writing a critical piece challenging the conventional environmental conflict line on Haiti (de Sherbinin 1996).

The controversy surrounding the Rockefeller Foundation's High Stakes report reveals the sharp division within the population community on whether or not to use environmental conflict arguments. Designed to counter international family planning budget cuts by a conservative Congress, the report draws heavily on Homer-Dixon to argue that unless steps are taken to reduce "surging population growth," resource scarcities will "ignite simmering tensions" and foment violent upheavals around the world (Rockefeller Foundation 1997:21). A foundation officer justified this line of argumentation to me on the basis that even if 10 percent of the report was alarmist, the other 90 percent was about reproductive health, and the only way to reach conservatives in Congress was through the idea of enlightened self-interest. The report was released with great fanfare in Washington. According to a prominent reproductive health advocate, the mythology at Rockefeller was that it really turned the tide in Congress,

though in reality it was "in the dirt lobbying" that saved international family planning assistance.

The process of drafting the report produced an ideological struggle in the population community. According to Joan Dunlop, then president of the International Women's Health Coalition, the draft was heavily criticized by reproductive health advocates, including herself. A line was clearly drawn between those willing to use national security arguments in the service of population assistance, and those who thought they would undermine the Cairo reforms.

Population groups thus made (and some continue to make) strategic use of environmental conflict ideas, but real and perceived opposition from feminist quarters helped prevent anything like a discourse coalition from forming around them. The irony, of course, is that population funding, mainly from PGSI and the Rockefeller Foundation, sustained Homer-Dixon's enterprise, but the NGO population community itself held back from full-scale support.

Several U.S. NGO environmental groups also tapped into environmental conflict ideas, although the community as a whole did not embrace them strongly. The Worldwatch Institute was the most prominent group to take up environmental conflict. This is not surprising given that both Lester Brown, who holds strong neo-Malthusian views, and Michael Renner were working on environmental security issues concurrently with Homer-Dixon. The Institute's publication Beyond Malthus (Brown, Gardner and Halweil 1999) uses Homer-Dixon's ideas in its chapter on population and conflict.

While not focusing on environmental conflict per se, the Natural Heritage Institute, with financial support from two anti-immigration funders (the Weeden and

Compton foundations), produced a report for the U.S. Commission on Immigration Reform which linked population-induced environmental degradation and desertification to Mexican migration to the U.S. (Natural Heritage Institute 1997). The report, which is flawed methodologically[12], was featured in the 1997 Environmental Change and Security Project Report.

Advocacy groups in other fields also did a bit of 'discourse tapping.' In 1999 the Center for Defense Information, an NGO watchdog group which monitors the military, made a television documentary "Water, Land, People and Conflict" for its America's Defense Monitor series (Show No. 1143), with support from the ECSP. In addition to talking heads talking about the threat of environmental conflict, the documentary contains lurid pictures of Third World violence and hunger.

Today, as many interviewees predicted, environmental conflict ideas continue to circulate, but at a much lower level of activity than in the 1990s, and often in conjunction with other environmental security concerns. One way in which they circulate is through websites and list serves which keep alive at least the illusion of a network, if not the reality. The ECSP has a longstanding list serve; other cyber sites include the website of the Environmental Security Initiative of the IUCN and International Institute for Sustainable Development (www.iisd.org/natres/security) and the Environment, Development and Conflict News based in Sweden (www.padrigu.gu.se/EDCNews). In addition there are a number of websites which focus on population and environment issues, created by groups such as the International Union for the Scientific Study of Population (IUSSP) and the Population Information Program at Johns Hopkins University.

Environmental conflict ideas also continue to circulate through the media. For example, a new documentary "On the Brink," part of a larger environmental series due to play on U.S. public television, was screened at the Woodrow Wilson Center in March 2002. From reading the ECSP report on the film, it appears to be an unreconstructed and alarmist depiction of the degradation narrative, blaming population pressures, environmental degradation and migration for violent conflict in Peru, Bangladesh and along the U.S.-Mexican border. "'On the Brink' concludes that developed countries must address environmental security as major foreign policy issues," the report reads. "Bangladesh, Peru, and other areas are just examples of how water scarcity, land degradation, and forest depletion can help destablilize societies and contribute to revolution" (Lalasz and Greengrass 2002:1). The filmmakers decided to focus on environmental security when they were in Bangladesh filming another episode on global disease and a bomb went off a few feet away from them, "heightening their interest in how environmental pressures can contribute to conflict. 'The cameras don't lie,' said Zakin [the film's editor]. 'When people live without privacy, sanitation, or water, it can't help but exacerbate conflict'" (3).

Such media representations keep the Kaplanesque dark, violent Other alive in the American imagination, along with the neo-Malthusian chain of causality which goes along with it. It keeps the discourse alive for future tapping by whatever interests may find it useful.

In sum, the knowledge formations that have formed around environmental conflict do not easily fit one precise category, though the concept of issue network, if combined with attention to the role of strategic philanthropy, intentionality and

consensus around the frame of reference, comes the closest. Rather than the concept of discourse coalition, it is more useful to look at the process of 'discourse tapping' to understand a range of different actors and agencies' engagement with environmental conflict ideas. They were not so much bonded by a common policy purpose, but by the utility of the discourse for various political ends.

Part Three now turns to a more speculative exploration of environmental conflict ideas in relationship to future trends in threat representation and environmental surveillance.

III: THE FUTURE OF ENVIRONMENTAL CONFLICT IDEAS IN THE STRATEGIC DEMOGRAPHY AND GEOGRAPHY OF THREATS

To repeat a popular truism in the U.S., we now live in a post-September 11 world. There is no doubt that the security climate has changed. Tentative as they were, the Clinton administration's steps toward a more multilateralist foreign policy have given way to a unilateralist assertion of American power based on military might. Counter-insurgency is back in vogue. A recent issue of the New York Times Magazine (7/21/02) contains a laudatory article about U.S. Special Forces training Filipino soldiers in jungle warfare (Webster 2002), while its Style section features two designer outfits side by side, one a sweater with a nature scene, the other a coat imprinted with the silhouette of a menacing helicopter. As I complete this thesis, the U.S. is preparing for war with Iraq despite widespread international opposition.

Can environmental conflict ideas survive this new security climate as well as the

Bush administration's hostility toward both domestic and international environmental regulation? On first glance, one might be tempted to answer no, but there are indications otherwise. Environmental security remains a valuable engagement tool for the U.S. military, with a role to play in the Persian Gulf and 'the war against terrorism.' Environmental conflict ideas also continue to function discursively within the domains of strategic demography and geography, helping to identify and amplify new threats. In the case of strategic demography, environmental conflict ideas reinforce concerns about the "youth bulge" and religious and political extremism. In the case of strategic geography, they play a role in the increasing securitization of conservation. While environmental conflict ideas may no longer be center stage, they are still part of the supporting cast.

The Youth Bulge and the Muslim Terrorist

Chapter Three examined the "youth bulge" -- the belief that a large population cohort of young males provide the fodder for political extremism, particularly if they are urban and unemployed (see Hendrixson 2002) -- as a concept related to the degradation narrative. Even before September 11, the youth bulge of primary concern was Islamic (e.g. Huntington 1996); today it is overwhelmingly so. Youth bulge theory is now combined with potent fears and stereotypes of out-of-control Muslim fertility to produce a quasi ethno-religious strategic demography. The October 15, 2001 cover of Time Magazine, for example, features a boy of Middle Eastern descent holding a toy gun, with the lead story entitled "Why They Hate Us: The Roots of Islamic Rage -- and What We

Can Do About It" (cited in Gluckman 2002:12). In February 2002, DCI George Tenet

testified before the U.S. Senate Select Intelligence Committee:

> Demographic trends tell us that the world's poorest and most politically unstable regions, which include parts of the Middle East and sub-Saharan Africa, will have the largest youth populations in the world over the next two decades and beyond (Tenet 2002).

Environmental conflict ideas function within this strategic demography by

linking youth bulge theory to resource scarcity. As noted previously, Homer-Dixon has

incorporated the youth bulge into the degradation narrative. Resource scarcities force

people to migrate from urban to rural areas, and according to Homer-Dixon,

> Rural-urban migrants tend to be relatively young, which accentuates the youth bulge in urban populations in poor countries...Young urban populations, especially unemployed young men, are easier to mobilize for radical political ends (Homer-Dixon 1999:157).

Homer-Dixon portrays these "radical political ends" as often revolving around ethnic

and identity politics.

If resource scarcities, by driving migration, help create the youth bulge, the youth

bulge in turn is seen to create more resource scarcities, both social and environmental.

There are too few jobs and schools for too many young men, just as there is not enough

water for them to drink, especially in the Middle East. Thus, writing in the wake of

September 11, Robert Kaplan highlighted dangerous "bulges in the number of youths

across the Middle East," followed in the next sentence with the warning that "the amount

of available water per capita will diminish by nearly half in many parts of the Middle

East over the next twenty years" (Kaplan 2002:54).

Security scholar Paul Kennedy believes that the Bush administration will have to

take account of the threats posed by the youth bulge, population density pressures and

resource scarcities, as manifested in places like Kashmir and the Gaza strip (e-mail communication 6/1/02). In a recent presentation at Amherst College, he spoke of the danger of frustrated young men without jobs, and the risk that they would become like the stone-throwing youths in Gaza and Kashmir. He characterized all Muslim societies as having higher fertility rates and argued that differential fertility between Hindus and Muslims was a cause of the communal violence in India (Kennedy 2002). Ironically, Kennedy uses such examples to argue for a broader approach to U.S. security, involving development assistance, not just military might, reflecting once again the deployment of neo-Malthusian stereotypes for ostensibly liberal ends (Kennedy 2001,2002).

The linking of the youth bulge to resource scarcities and high Muslim fertility has the effect of naturalizing and hence obscuring the economic and political reasons why young men might migrate to cities and be unemployed in the first place, and why they might join radical groups in the second. It also says nothing about the impact of U.S. foreign policy on the Middle East. The great strategic benefit of naturalization is that it cuts off serious interrogation.

Lately, the naturalization of the youth bulge has taken an even more bizarre twist, with evolutionary psychologists arguing that the size of a country's young male population determines the incidence of war. Young male tendencies to engage in "coalitional aggression" have become an advantageous trait, in part because highly esteemed aggressive males attract "advantaged females" so that the genetic, cognitive and emotional structure conducive to coalitional aggression is passed down. War is thus a "natural" phenomenon[13] (Mesquida and Wiener 2001:230-231). While presumably such ideas do not hold much sway in policy circles, their inclusion *without rebuttal* in

the Woodrow Wilson Center's 2001 <u>Environmental Change and Security Project Report</u> is a worrying trend.

Youth bulge theory is not without its critics. For example, an article in the <u>New York Times</u>, "Radicalism: Is the Devil in the Demographics?," concludes with the observation that "it is not just the number of young people but the degree of their exclusion from economic and political participation that rouses them politically" (Sciolino 2001:2). While this point might seem obvious, the value of youth bulge theory in sustaining anti-Muslim sentiment and support for the 'war on terrorism' will probably keep it in circulation. In this sense, it serves as a useful *tappable* discourse, but will it be operationalized militarily?

Unfortunately, in the case of Chechnya, that may already be the case. The International Helsinki Federation recently charged the Russian army of abducting and murdering young Chechen males in a deliberate process "of thinning out a population of young men" (BBC News 2002).

As the U.S. 'war on terrorism' proceeds, it will be important to keep an eye on the deployment of youth bulge theory, both rhetorically and strategically, as well as on the supportive role environmental conflict ideas may play in reinforcing it by linking it to resource scarcity.

Environmental Surveillance: Securitizing the Local

Environmental conflict ideas continue to function as part of "the politics of planetary surveillance" (Deibert 1996). As noted in Part One, an important function of these ideas, and the linking of environment and security more generally, has been to

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support the use of military and intelligence assets for environmental surveillance. The environmental mission can also be used to mask what are fundamentally military objectives.

For example, Brazil's controversial System for Vigilance of the Amazon (SIVAM), a complex ground and aerial surveillance system, has been marketed as a way to enhance environmental protection capacities when its main aim is to monitor illicit activities in the Amazon, such as narco-trafficking and the movement of foreign guerrillas. According to National Defense University professor Guedes da Costa (2002:47), "The decisive factor in the acceleration of SIVAM's development was the United States' intensified push to curb drug production and smuggling from Colombia, Peru and Bolivia by air detection and interception of suspect aircraft." The U.S.-based Raytheon Corporation is one of the project's prime contractors and the US. Export-Import Bank is providing almost three-quarters of the finance (Guedes da Costa 2001).

Planetary surveillance is not just a function of military and intelligence agencies. GIS data from civilian sources is an increasingly important tool for scientists and researchers in the environment and related fields. The existence of GIS data is not problematic in and of itself; like most research tools, GIS has both positive and negative applications. However, it is not neutral and value-free. As Turton and Warner (2002) write, "Like any map, a GIS representation of the world imposes a set of values on its users. The answer to a research question is dependent on the assumptions underlying that question" (68).

If those assumptions are neo-Malthusian, for example, one can expect a certain interpretation and presentation of the data. A case in point is a 1999 UNEP report on

early warning of selected environmental issues in Africa, which uses changes in population density data as a proxy for the location of emerging environmental threats (Singh, Dieye, et al 1999). The apparent sophistication of the GIS data sets obscures the simplistic nature of the causal analysis.

GIS data can serve the interests of what Turton and Warner (2002:71) call "gate-keeping elites," who collect and manipulate the representation of the data in ways which reflect their interests. The way data is colored-coded, for example, often is designed to elicit a certain response. In the UNEP report as well as others (e.g. Kennedy 1998), high population densities are mapped in red. GIS data can also be harnessed to locate exploitable energy and water reserves and map areas of genetic diversity for corporate capture. More profoundly, "at the philosophical, epistemological, and ontological level, GIS represents a Western tradition of decomposing the world into minutiae rather than integrating it holistically" (Turton and Warner 2002:71).

This process of decomposition has implications for how space itself is conceptualized. The 'deterritorialization' associated with the end of the Cold War and globalization has led to a 'reterritorialization' of the local, particularly in the South (see Chapter One and O Tauthail 1996). Through the lens of the remote sensor, the local has become a place that can be 'known' down to almost the last visible detail, providing the illusion, if not the reality, that any threats it contains can be controlled. In the blink of the satellite eye there is a profound erasure of both distance and time, reinforcing the sense that the near and far literally converge.

This convergence increases the range of locales of strategic importance. Defense scholar Gregory Foster writes of the convergence in the postmodern era "between the

tactical (local) and strategic domains of action:"

> Seemingly obscure, minor events in the remotest reaches of the globe can (and regularly do) have almost instantaneous strategic reverberations at many spatial and temporal removes from their point of occurrence. Thus, what might otherwise appear to be an environmental condition with purely local consequences -- polluted air or water supplies, the progressive diminution of arable land due to desertification, the loss of forest reserves -- can in effect produce effects of strategic import (Foster 2001:377).

The perception of convergence has ramifications for the securitization of local environments by both national and international actors. As Buzan, Waever and de Wilde (1998) point out, in the environmental field, it may be at the local level where one sees the real instrumental effects of securitizing the environment. I would venture that these instrumental effects may manifest themselves in an increase in coercive conservation measures, linked with commercial and counter-insurgency goals, as well as a proliferation of population-environment projects as one of the new frontiers of population control.

Coercive conservation measures, of course, are not a new phenomenon. Wildlife conservation efforts, from colonial times onward, have often involved the violent exclusion of local people. As Neumann notes, in much of colonial Africa,

> both European hunting and wildlife conservation efforts were closely associated with military activities. People trained by the state in the use of weapons and the application of violence -- former police, prison, or military personnel -- have been traditionally the primary source of recruits for game rangers...This history is today reflected in the paramilitary style of organization of most wildlife and park agencies in Africa (Neumann 2001:307).

Both through their practices and claims (which are often neo-Malthusian), many international conservation agencies have been implicated in coercive conservation (Peluso 1993; Guha 1997).

Concurrent with mounting interest in environmental security, in 1988 a coalition of environmental groups, led by the Worldwide Fund for Nature and including the World Bank, published a report on Conserving the World's Biodiversity. Its authors argued that international conservationists should "systematically" approach national defense forces for protection of biological resources since many threats to national security are rooted in inappropriate resource management. The report stated that, "As conflicts between people and resources increase in the coming years, the military will require detailed understanding of the biological, social, and economic issues involved if they are to deal effectively with these conflicts" (McNeeley, Miller et al 1988:131, cited in Peluso 1993:66-67). The DOD's assistance to conservation projects in Africa (See Part One) suggests that such advice was taken to heart.

In recent years, coercive conservation has come to mean more than just arming forest guards with more lethal weapons. Designed to reduce the need for overt state violence, "community participation" projects rely on self-surveillance at the village level. Neumann (2001) describes such schemes in Tanzania where peasants who inhabit the buffer zone around restricted wildlife areas receive some title to land and access to the material resources in the areas in return for policing the boundaries. "Control over the population is achieved not through force and coercion, but primarily through the ordering and partitioning of space" (327). On the surface the peasants' participation is voluntary, but the continuing threat of state violence greatly influences their decision to cooperate. Neumann contends that such schemes have the consequence of extending state control over village lands, in part to meet the needs of the growing eco-tourism industry. Similar self-policing processes are at work in India, where Sundar argues that

Joint Forest Management schemes involving local communities often represent a shift to more "more micro-disciplinary forms of power" (Sundar 2001:352). Such schemes can reinforce the power of certain communities (often sedentary farmers) over less powerful ones (pastoralists).

This shift to "micro-disciplinary forms of power" in the classic Foucaultian sense indicates a new kind of securitization at the local level. Through a combination of the carrot and the stick, villagers not only take on some of the policing functions of the state, but through a process of education/indoctrination internalize "introduced ideologies" of conservation (Neumann 2001:326). Population-environment projects could increasingly complement these micro-disciplinary objectives by linking the control of women's fertility to conservation schemes. As noted in Chapter One, the UNFPA has called for greater integration of family planning programs with park and forest management schemes, because according to the agency, fertility rates are often higher around nature preserves and it is poverty and population growth which are destroying the environment there (UNFPA 2001).

These projects are already underway in a number of places. The World Wildlife Fund, for example, has a population-environment project in the Calakmul Biosphere Reserve in Mexico's Yucatan Peninsula (Ericson 2000). The Pathfinder Fund, a U.S. based family planning agency, has partnered with a Brazilian NGO in a population-environment project around the Grande Sertao Veredas National Park (Cohen, Garbus et al 1999). Several years ago Conservation International transitioned from focusing solely on the creation and protection of parks to population initiatives, with "the impetus for change" coming "from losing the battle to conserve nature because population growth

was most rapid in the peak diversity hotspots" (Campbell, Nations, et al 2000:187).

Norman Myers and colleagues (Myers, Mittermeir et al 2000) have popularized the

concept of "biodiversity hotspots," areas where exceptional concentrations of endemic

species are facing exceptional loss of habitat, and which thus warrant special attention.

Such "hotspots" are not only of value to the conservation biologist. There are

other competing and complementary motives for protecting them, including their

commercial value for natural resource extraction, eco-tourism and bio-prospecting[14] and

their security value to defense interests. In this latter regard, it should be noted that

population-environment projects often utilize population monitoring systems, not only

to register births but to track migration (see UNFPA 2001); potentially, this tracking

could be of use to defense and intelligence interests. A monitoring system has been

proposed for the World Wildlife Fund in the Calakmul Biosphere Reserve in Mexico,

where many refugees from social unrest in Chiapas have settled in recent years.

According to one of the designers, even though population density remains low around

the Reserve, population growth has "a high potential ecological impact" because of the

area's low carrying capacity. In-migration would be tracked by "administration of short

questionnaires to samples of key informant households every 12 months in

representative 'sentinel' ejidos," a system which could then be adapted for use elsewhere

(Bilsborrow 2002:85-86).

It is not too difficult to imagine a scenario where coercive conservation,

population control and security objectives come together in a "hotspot" locale. For

example, in the Lacandon Forest in Chiapas, Mexico, where the Zapatista movement has

a strong base, Conservation International's Chiapas director has blamed deforestation on

overpopulation. "It's obvious that the main problem is overpopulation," he told the Houston Chronicle. "The children of the farmers don't have any land. They can't all be peasants" (Althaus 2002a:2).

An ecologist advising the state's Indigenous Affairs Ministry countered that the real intention of the conservationists is to build "a great green wall to keep the resources in the hands of the multinational companies" (4). That there may be some truth to this allegation is indicated by the fact that Conservation International received a contribution of $3.5 million from a Mexican conglomerate which produces genetically modified seeds and operates a seed facility in the region (Althaus 2002a).

A recent article in La Jornada claims that Conservation International, using USAID-provided GIS imaging and digital photographs from its own airplane, identified indigenous (Zapatista) settlements in the Lacandon forest preserve which later led to their expulsion by the Mexican government. The article also mentions that Conservation International is operating population-environment projects in a nearby region (Bellinghausen 2002). In the Lacandon Forest itself the Mexican government has been pursuing an aggressive female sterilization campaign, albeit with limited success (Althaus 2002b).

Conservation International's Vice President for Agency Relations in Washington, D.C., James Nations, explicitly refers to Chiapas, Guatemala, Somalia, Rwanda, Cambodia and the Philippines as "environmental/population/human conflict hotspots," after writing favorably about the ECSP meeting where the evolutionary psychologists linked war to the prevalence of young men in a population. He urges more partnerships between conservation and population organizations to bring services to "dispersed rural

families on the edge of the agricultural frontier in high biodiversity hotspots" (Nations 2002:16-17).

Conservation International's activities in Chiapas are only one example, but they point to the possibility of an emerging population-environment-security complex which uses state-sanctioned violence as well as more micro-disciplinary forms of power to enforce its strategic demography and geography at the local level. To forecast such developments is not to state that they are *bound* to happen. That would obviate the role of both contingency and agency in the making of policy and politics, as well as the important differences between specific places (and presumably between different organizations involved in these activities). What this kind of speculative forecasting provides is a guide to what *may* happen, and what to keep one's eye on, in order to make the most effective interventions as a critical intellectual. In the concluding part I turn to this question.

IV: THE ROLE OF THE CRITICAL INTELLECTUAL

In this thesis I have used a variety of methodological approaches, from the more discursive to the agent-based, to understand how a particular set of ideas about environmental conflict came to wield power in the world. The purpose was not to develop one clear synthetic model to explain the relationship between knowledge, power and policy, but rather to gain insights into that relationship through a contemporary case study in the U.S. involving a strategic issue area. My intention was also to approach environmental conflict ideas from a number of different directions in order to mount the most effective challenge to them. This was not just an intellectual but a political

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exercise, since I believe this particular set of ideas, based on deeply flawed neo-Malthusian reasoning, has had a number of negative effects. In interaction with other existing and evolving discourses and policy prerogatives, the ideas could continue to have negative effects into the future. Thus, it is doubly important to take them to task.

I have taken them to task in six main ways:

(1) In Chapter One, I considered the methodological approaches which are most useful to the project: Foucaultian concepts of the political economy of truth, biopower and strategic intelligibility; the contributions of constructivism and other approaches to knowledge communities; the role of strategic philanthropy in the production and dissemination of policy-relevant research in the U.S.; the politics of threat representation; and securitization.

(2) In Chapter Two, I explored the history of the larger neo-Malthusian discourse of which environmental conflict ideas are part and the means by which neo-Malthusian concepts and actors came to exercise such a strong influence on American foreign policy, including the important role played by strategic philanthropy. This history, though relatively well-researched and documented, is not well known to many scholars in the environment and security field. Without this history, it is difficult to understand the ways neo-Malthusian ideas are embedded in popular culture, environmentalism, the academy and policy circles, and the synergy between institutional expressions of them.

(3) In Chapter Three, I identified and analyzed the "degradation narrative," a hegemonic myth that has deeply influenced the evolution of the environment and security field. The persistence of this myth from colonial times to the present illustrates its tremendous staying power and hence the pressing need to uncover and contest it.

(4) In Chapter Four, I challenged the findings of Thomas Homer-Dixon's environmental conflict model and case studies in the belief that it is not simply enough to understand and expose the roots of this problematic approach; one must also offer a clear point-by-point refutation grounded in empirical evidence and political economy.

(5) In Chapter Five, I looked at the actors and interests which have promoted Homer-Dixon's work, from the role of private foundations to the support of key individuals such as Robert Kaplan, Al Gore and Timothy Wirth. Understanding the personal, political and financial dynamics of how certain ideas and their architects gain prominence while others do not is central to understanding the private-public nature of policy-related knowledge production in the U.S. I develop the concept of circumscribed heterodoxy to show how a project can appear more inclusive and diverse than it actually is.

(6) Finally, in this chapter I examined the intentional and unintentional impact of environmental conflict ideas and speculated on their effects in the future. I also considered the nature of the knowledge communities which have formed around them, and the ways in which environmental conflict ideas function as a tappable discourse for a variety of different interests and objectives.

The irony, of course, is that in writing this thesis, I have found myself becoming part of, and to some extent welcomed into, the knowledge community/network around environmental security. This has both advantages and disadvantages. On the advantageous side, it has enabled me to sit at the same table with key players in the debate, including Thomas Homer-Dixon, and to join up with researchers who are trying to move the field more toward the human security direction. My involvement with the

Global Environmental Change and Human Security Project, for example, has allowed me to write a policy brief on population challenging the degradation narrative (Hartmann 2000b), present my views at the Woodrow Wilson Center, and have an account of the meeting published in the 2001 Environmental Change and Security Project Report.

On the negative side is the problem of circumscribed heterodoxy. Are critics let into the epistemic fold with the knowledge that it is safe to do so since they have less power but are useful in several ways? When does one's engagement become a tool to legitimize a project by making it appear more open to other points of view than it actually is, or more diverse in terms of gender and ethnicity? And can one's engagement lead to a problematic expansion of the boundary object so that the independent space from which critics operate progressively diminishes because of the politics of inclusiveness, if not cooption? Is this process even more problematic in a field where academics intersect with defense and intelligence officials? This latter question came home to me when I realized that my attendance at an environmental security conference in London was funded by the British Ministry of Defense.

None of these questions have easy answers and it is often a matter of navigating one's way through the tricky waters with a healthy dose of skepticism and common sense. There are certainly perils of engagement, but there are also perils of remaining aloof. Had there been more vocal outcry from the academy and policy circles when environmental conflict ideas started to gain prominence, might they have done less damage? Perhaps not, but perhaps so.

In the end I believe the role of the critical intellectual is to speak out as forcefully and convincingly as possible, even at the risk of flying in the face of the latest well-

funded policy fad or getting absorbed in uncomfortable ways into the epistemic fold. Depending on the circumstance, it may also be important to draw a moral and political line beyond which one is not prepared to go, in this case cooperation with defense and intelligence agencies.

With the current intensification of American militarism, the fundamental question raised at the onset of the environmental security debate is even more salient today: Should environmental issues be linked to national security? As Daniel Deudney wrote eloquently over ten years ago:

> The movement to preserve the habitability of the planet for future generations must directly challenge the tribal power of nationalism and the chronic militarization of public discourse. Ecological degradation is not a threat to national security; rather environmentalism is a threat to national security attitudes and institutions. When environmentalists dress their arguments in the blood soaked garments of the war system, they betray their core values and create confusion about the real tasks at hand (Deudney 1991:28).

The challenge ahead is not only to de-link the environment from national security, but to de-link it from neo-Malthusianism and its strategic demographic and geographic manifestations. Securitization at the local level, through surveillance, coercive conservation, and population control, rests on the degradation narrative and other key assumptions about the relationship between the environment, population growth, and conflict. Neo-Malthusianism is also heavily implicated in the ongoing racialized representation of the dangerous Third World 'Other', especially refugees and immigrants, and in the current 'war on terrorism', young Muslim men. My hope is that this thesis, by examining the origins and impact of environmental conflict ideas, helps lay bare the neo-Malthusian logic of strategic scarcity and thereby contributes to new understandings of the political economy of environmental degradation and conflict.

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Endnotes to Chapter Six

[1]. It is unclear from the minutes whether other representatives of his project were in attendance, or the minutes are referring to him citing the group's findings.

[2]. Thomas (1997) suggests that DOD's desire to partner with the EPA can also be viewed more cynically, as a way for the DOD to keep the EPA from controlling the clean-up of its contaminated sites.

[3]. In regard to population, however, the official mentioned that the carrying capacity of the land is an important consideration in areas which could have a widespread disaster. He cited the case of Sudan where population is exceeding the carrying capacity of the land. In such areas, the military needs to be prepared for an emergency response, such as airlift missions to feed people.

[4]. The DOD environmental security office has an Outreach Directorate "to integrate non-governmental and public participation into the process of shaping and implementing DOD environmental policies" (ECSP 1997:208).

[5]. According to a well-connected security scholar in Washington, it was Gore who really drove the process: "The intelligence community is being told to do this work and it's Gore who's doing the requesting," he told me. Although the CIA had been undertaking environmental analysis since the 1980s, under Gore's direction the relationship between the environment and political instability became a focus of attention.

[6]. Greenhouse's article in the New York Times was one of the first pieces in a major media outlet to discuss environment and security as a new focus of the intelligence community.

[7]. For an interesting discussion of these concerns in the MEDEA project, see Deibert (1996).

[8]. In one speech, Atwood said, "If rural migrants overwhelm the cities by the tens of millions, we must breathe the air they pollute and drink the water they foul. Their diseases will find us. Their misery will envelop us" (Atwood 1996:86). Also see Atwood (1994).

[9]. Grossi told me she was from the "carrying capacity side of things" and that USAID had gone too far in the direction of reproductive rights to the exclusion of population stabilization/carrying capacity issues.

[10]. The OECD's Development Assistance Committee (DAC) held an "In-Depth Session on Environmental Security and Displacement" in 1996, at which Homer-Dixon's co-author Phil Howard was one of four featured speakers (OECD DAC 1996). The DAC also commissioned the International Union for the Conservation of Nature (IUCN) to do a "State-of-the Art Review on Environment, Security and Development Cooperation,"

co-authored by Geoffrey Dabelko, Director of the ECSP Project, Steve Lonergan and Richard Matthew (2002). Based on a small survey, the initial draft of the study found little knowledge of, or keen interest in, environmental conflict among development agencies (Dabelko, Lonergan and Matthew 1998). The European Union (EU) Analysis and Policy Planning Unit held a seminar on environmental security in May 1997 ("Environmental Security -- The Economic Security Challenge"), which questioned whether it was just another green fashion. According to the organizers of the meeting, Veronique Arnault and Sabine Weyand, this meeting did not focus on environmental conflict in the Third World but rather major environmental challenges to EU economic security, such as climate change and nuclear pollution. They expressed their concern to me that discussions about EU economic security could potentially create a backlash against immigrants, noting the risk of over-simplification and creating "a threat perception."

[11]. At the time CSIS was doing a major study of population and security in Haiti.

[12]. For example, population pressure on natural resources is measured by the rate of deforestation (though it may have little to do with deforestation), and the authors assert that population growth is linked to migration because it is associated with poverty, and poverty is a major determinant of migration (Natural Heritage Institute 1997).

[13]. Wiener and Mesquida downplay ethnic differences, however; the Zapatistas, Somali insurgents, and Khmer Rouge are all just "young men." They propose that the "male age composition thesis" explains conflict much better than the traditional environmental conflict model (Mesquida and Wiener 2001:230-231).

[14]. The UNFPA (2001) notes, for example, how "most of the world's most effective pharmaceutical products" are derived from plants and animals frequently found "in tropical climates, where biodiversity is greatest, and often in 'biodiversity hotspots' subject to increasing human pressure" (47). That pressure is mainly defined as population pressure. Also see Bilsborrow (2002).

APPENDIX A

LIST OF INTERVIEWS

(positions noted are at time of interview)

NORTH AMERICA

United States:

Carmen Barroso, Director, Population Program, MacArthur Foundation. Chicago, IL, June 1, 2000.

Kennette Benedict, Area Director, Program on Global security and Sustainability, MacArthur Foundation. Chicago, IL, June 1, 2000.

Jeffrey Boutwell, Associate Executive Officer, American Academy of Arts and Sciences, Cambridge, MA. Phone, November 10, 2000.

Kent Butts, Director, National Security Issues Branch, Center for Strategic leadership, U.S. Army War College, Carlisle Barracks, PA. Phone, June 19, 2002.

Beth Chalecki, Research Associate, Pacific Institute for Studies in Development, Environment and Security. Oakland, CA. September 28, 1999.

Robert S. Chen, Deputy Director, Center for International Earth Science Information Network, Columbia University. New York, May 14, 1999.

Eileen Clausen, Director, Pew Global Climate Change Initiative. Washington, D.C., March 13, 2000.

Barbara Crane, Senior Policy Adviser, Office of Population, Center for Population, Health and Nutrition, U.S. Agency for International Development. Washington, D.C., June 11, 1999.

Ken Conca, Assistant Professor, Department of Government and Politics, University of Maryland. Phone, November 10, 2000.

Geoffrey Dabelko, Director, Environmental Change and Security Project, Woodrow Wilson Center. Washington, D.C., June 8, 1999.

Joan Dunlop and Kate Grant, Women's Lens on Foreign Policy, Rockefeller Brothers Fund. New York, January 13, 1999.

Elizabeth Economy, Senior Fellow, China Studies and Deputy Director, Asia Studies,

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Council on Foreign Relations. New York, January 12, 1999.

Robert Engelman, Vice President for Research, Population Action International. Washington, D.C., March 13, 2000.

Alene H. Gelbard, Director, International Programs, Population Reference Bureau. Washington, D.C., June 10, 1999.

Wendy R. Grieder, Office of International Activities, Environmental Protection Agency. Washington, D.C., March 13, 2000.

Joanne Grossi, Senior Technical Advisor, Population, Health and Nutrition Office, U.S. Agency for International Development. Washington, D.C., June 9, 1999.

Peter Haas, Professor of Political Science, University of Massachusetts. Amherst, MA., April 3, 1998.

Jacqueline Hamilton, Director of Population Programs, Natural Resources Defense Council. Washington, D.C., June 9, 1999.

Colonel Mark Hamilton, Acting Deputy, Force Protection, Office of the Deputy Under Secretary of Defense for Environmental Security. Washington, D.C., June 8, 1999.

Allen Hammond, Senior Scientist and Director of Strategic Analysis, World Resources Institute. Washington, D.C., June 9, 1999.

Colin Kahl, PhD candidate, Columbia University. Washington, D.C., February 19, 1999.

Norman Kahn, Director of Assessments, DCI Environmental Center, Central Intelligence Agency. Vienna, VA, June 10, 1999.

Michael Klare, Director, Five College Program in Peace and World Security Studies. Amherst, MA., October 21, 1998.

Chris Lenhardt, Associate Director for Information Services, Center for International Earth Science Information Network, Columbia University. New York, May 14, 1999.

Marc Levy, Associate Director, Center for International Earth Science Information Network, Columbia University. New York, May 14, 1999.

Ronnie Lipschutz, Associate Professor, Politics Department, University of California, Santa Cruz. Phone, April 25, 2000.

Jonathon Margolis, Director, Office of Policy Coordination and Initiatives, Bureau of Oceans and International Environmental and Scientific Affairs, U.S. Department of State. Washington, D.C., June 11, 1999.

Ellen Marshall, United Nations Foundation. Washington, D.C., June 10, 1999.

Richard Matthew, Assistant Professor, Department of Urban and Regional Planning, University of California, Irvine. San Jose, Costa Rica, December 11, 1999.

Margaret Pollack, Director, Office of Population, U.S. Department of State. Phone, March 24, 2000.

Laura Reed, Coordinator, Five College Peace and World Security Studies Program. Amherst, MA., February 27, 2002.

Peter Riggs, Program Officer, Rockefeller Brothers Fund. New York, January 13, 1999.

Susan Sechler, Director, Global Inclusion Program, Rockefeller Foundation. New York, November 13, 2000.

Sarah Seims, Associate Director, Population Sciences, Rockefeller Foundation. New York, January 13, 1999.

Brian D. Smith, Research Analyst, Evidence Based Research Inc. Washington, D.C., June 10, 1999.

John C. Topping, Jr., President, Climate Institute. Washington, D.C., June 11, 1999.

David Victor, Robert W. Johnson, Jr., Fellow for Science and Technology, Council on Foreign Relations. New York, January 12, 1999.

Lyuba Zarsky, Co-Director, Nautilus Institute for Security and Sustainable Development. Berkeley, CA, September 28, 2002

Canada:

Simon Dalby, Professor, Department of Geography and Environmental Studies, Carleton University, Ottawa. Phone, January 28, 2000.

Thomas Homer-Dixon, Director, Peace and Conflict Studies Program, University College, University of Toronto. Irvine, CA., March 18, 2000; Toronto, CA., September 8, 2000.

EUROPE:

Belgium:

Veronique Arnault, Head of Unit, and Sabine Weyand, Analysis and Policy Planning, Directorate General I -- External Relations, European Commission. Brussels, June 8,

1998.

Margaret Brusasco-MacKenzie, Adviser, Follow-up to UN Conference on Environment and Development, Directorate-General XI -- Environment, Nuclear Safety and Civil Protection, European Commission. Brussels, June 9, 1998.

Nicholas Christoforides, Directorate-General 1B: External Relations, European Commission, June 9, 1998.

Alan Cross, Space; Earth Observation, Directorate-General XII -- Science, Research and Development, European Commission. Brussels, June 9, 1998.

Martin Landgraf, Foreign Policy Unit, Directorate-General VII -- Development, European Commission. Brussels, June 8, 1998.
Dieter Oldekop, Head of Unit, Directorate-General 1B -- External Relations, European Commission. Brussels, June 8, 1998.

Germany:

Alexander Carius, Ecologic, Center for International and European Environmental Research, Berlin. Phone, May 19, 1998.

Netherlands:

Wouter T. de Groot, Deputy Director, and Ruth Noorduyn, Center of Environmental Science, Environment and Development Program, Leiden University. Leiden, June 4, 1998.

Dr. M.A. Mohamed Salih, Senior Lecturer in Politics of Alternative Development Strategies, Institute of Social Studies. The Hague, June 3, 1998.

Martin van den Berg and Frank Werring, Directorate for Industry and Consumer Policy, Directorate-General for Environmental Protection. The Hague, June 3, 1998.

Luc L. P. van de Goor, Coordinator, Research Project on Causes of Conflict in the Third World, Netherlands Institute for International Relations, Clingendael. The Hague, June 3, 1998.

Rob Visser, Head, Poverty Analysis and Policy Division, Dutch Ministry of Foreign Affairs. The Hague, June 3, 1998.

Norway:

Nils Petter Gleditsch, Research Professor, International Peace Research Institute, Oslo. San Jose, Costa Rica, December 11, 1999.

Dan Smith, Director, International Peace Research Institute (PRIO), Oslo. Washington, D.C., February 18, 1999.

Switzerland:

Alex de Sherbinin, International Union for the Conservation of Nature, Social Policy Group, Geneva. Phone, June 29, 1998.

Mark Halle, Project Director, State-of-the-Art Review on Environment, Security and Development Cooperation, International Union for the Conservation of Nature. Geneva, July 23, 1998.

United Kingdom:

Philip Champain, Training Manager, International Alert. London, May 20, 1998.

Timothy Dyson, Professor of Population Studies, London School of Economics. London, June 1, 1998.

Cecile Jackson, Senior Lecturer in Gender Relations and Agrarian Change, University of East Anglia. Norwich, June 16, 1998.

Norman Myers, Writer and Consultant in Environment and Development, Green College, Oxford University. Oxford, June 12, 1998.

Koos Neefjes, Policy Adviser, Environment and Development, Oxfam. Oxford, June 23, 1998.

Timothy O'Riordan, Professor and Associate Director, Center for Social and Economic Research on the Global Environment, University of East Anglia. Norwich, June 16, 1998.

Dennis Pain, Social Development Adviser, Department for International Development. London, June 30, 1998.

James Tansey, PhD candidate, Center for Environmental Risk, Environmental Sciences, University of East Anglia. Norwich, June 16, 1998.

Sir Crispin Tickell, Director, Green College Center for Environmental Policy and Understanding, Oxford University. Oxford, June 29, 1998.

Emma Visman, Project Coordinator, Saferworld. London, May 20, 1998.
Kitty Warnock, Panos Institute. London, July 3, 1998.

OTHER COUNTRIES

India:

Smitu Kothari, Lokayan, Delhi. Amherst, MA., October 21, 1998.

Philippines:

Walden Bello, Co-Director, Focus on the Global South, Thailand and Philippines. Amherst, MA., September 30, 1998.

APPENDIX B

LIST OF PROJECT PUBLICATIONS

Project on Environmental Change and Acute Conflict

Occasional Papers Series published by the American Academy of Arts and Sciences, Cambridge, MA:

Peter Gleick, "Water and Conflict," No. 1, September 1992.

Miriam Lowi, "West Bank Water resources and the Resolution of Conflict in the Middle East," No. 1, September 1992.

Vaclav Smil, "Environmental Change as a Source of Conflict and Economic Losses in China," No. 2, December 1992.

Jack Goldstone, "Imminent Political Conflicts Arising from China's Environmental Crises," No. 2, December 1992.

Sanjoy Hazarika, "Bangladesh and Assam: Land Pressures, Migration and Ethnic Conflict," No. 3, March 1993.

Astri Suhrke, "Pressure Points: Environmental Degradation, Migration and Conflict," No. 3, March 1993.

The Project on Environment, Population and Security

Reports published by the American Association for the Advancement of Science, Washington, D.C., in collaboration with University College, University of Toronto:

Thomas Homer-Dixon (1995). Strategies for Studying Causation in Complex Ecological-Political Systems.

Peter Gizewski and Thomas Homer-Dixon (1995). Urban Growth and Violence: Will the Future Resemble the Past?

Valerie Percival and Thomas Homer-Dixon (1995). Environmental Scarcity and Violent Conflict: The Case of Rwanda.

Valerie Percival and Thomas Homer-Dixon (1995). Environmental Scarcity and Violent Conflict: The Case of South Africa.

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Kimberley Kelly and Thomas Homer-Dixon (1995). Environmental Scarcity and Violent Conflict: The Case of Gaza.

Philip Howard and Thomas Homer-Dixon (1995). Environmental Scarcity and Violent Conflict: The Case of Chiapas, Mexico.

Peter Gizewski and Thomas Homer-Dixon (1996). Environmental Scarcity and Conflict: The Case of Pakistan.

Peter Gizewski with Lars Bromley and Brian Smith (1996). Data Sources: Environment, Population and Security.

Edward Barbier and Thomas Homer-Dixon (1996). Resource Scarcity, Institutional Adaptation and Technical Innovation: Can Poor Countries Attain Endogenous Growth?

Thomas Homer-Dixon and Valerie Percival (1996). Environmental Scarcity and Violent Conflict: Briefing Book.

Project on Environmental Scarcities, State Capacity and Civil Violence

Reports published by the American Academy of Arts and Sciences, Cambridge, MA in collaboration with University College, University of Toronto:

Charles Victor Barber (1997). The Case of Indonesia.

Elizabeth Economy (1997). The Case of China.

Mao Yu-shi, Ning Datong, Xia Guang, Wong Hongchang, and Vaclav Smil. An Assessment of the Economic Losses Resulting from Various Forms of Environmental Degradation in China.

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Adams, W.M. (1995). "Green Development Theory?," in Crush, ed. Power and Development.

Afshar, Haleh, ed. (1991). Women, Development and Survival in the Third World. London: Longman.

Agarwal, Bina (1994). A Field of One's Own: Gender and Land Rights in South Asia. Cambridge: Cambridge University Press.

_____(1997). "Re-sounding the Alert - Gender, Resources, and Community Action." World Development 25(1):1373-1380.

Agnew, John and Corbridge, Stuart (1995). Mastering Space: Hegemony, Territory and International Political Economy. London: Routledge.

Ahlburg, Dennis A. (2002). "Does Population Matter: A Review Essay." Population and Development Review 28(2):329-350.

Allan, J.A. (1996). "The Political Economy of Water: Reasons for Optimism but Long Term Caution," in Allan, ed., Water, Peace and the Middle East.

Allan, J.A., ed., with Court, J.H. (1996). Water, Peace and the Middle East: Negotiating Resources in the Jordan Basin. New York: I.B. Tauris Publishers.

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